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BEING THE JOURNAL OF THE
AVICULTURAL SOCIETY FOR
THE STUDY OF FOREIGN AND
BRITISH BIRDS IN FREEDOM
AND CAPTIVITY.

EDITED BY

HUBERT D. ASTLEY, M.A., F.Z.S., M.B.O.U.

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ANNUAL REPORT.

THROUGH the second year of the great war the Magazine has been maintained in spite of adverse circumstances, and it is to be hoped that members will do their very best to keep things going by PUNCTUALLY PAYING ANNUAL SUBSCRIPTIONS, and by writing articles whenever it is possible. For the Editor it has been uphill work. We have lost the valuable assistance of Mr. NEWMAN and Dr. LOVELL-KEAYS as honorary Business Secretaries, for which loss the war is responsible; whilst through deaths on the battle fields we have to sorrow for members whose names, no longer upon our list, are enrolled in a greater one, the roll of the honoured who have passed along the shining path.

The Council thanks very sincerely those who have contributed to the welfare of the Magazine, either by writing for it, or by kindly giving money towards the illustration fund, which is always more or less in need of pecuniary assistance.

If the Magazine can be upheld until Peace is declared, we hope for better days with renewed activity amongst many of the members whose time is now taken up with more weighty matters.

The Council tenders its thanks to Mr. THOMASSET, who, in spite of war-work, has kindly continued to hold the post of Hon. Treasurer. Neither does it forget the constantly helpful services of Dr. BUTLER.

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- DEWINTON, WILLIAM EDWARD, F.Z.S., M.B.O.U.; Southover, Burwash, Sussex. (Aug., 1903)
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- DREWETT, FREDERICK DAWTRY, M.A., M.D., F.R.C.P., F.Z.S., M.B.O.U.; 14, Palace Gardens Terrace, Kensington, W. (May, 1903)
- DUFF, Lady GRANT; Earl Soham Grange, Framlingham, Suffolk. (Aug., 1905)
- DUNLEATH, The Lady; Ballywalter Park, Ballywalter, co. Down, Ireland. (August, 1897)
- DUTTON The Rev. Canon The Hon.; Bibury Vicarage, Fairford. (Orig. Mem.)
- DYOTT, R. A.; Freeford, Lichfield. (1912)
- ECKSTEIN, F.; Ottershaw Park, Ottershaw, Surrey. (1912).
- EZRA, ALFRED; 110, Mount Street, London, W. (1912)
- EZRA, DAVID; 3, Kyd Street, Calcutta. (June, 1912)
- 110 FALKNER, GUY; Westbourne House, Belton, Uppingham. (Oct., 1915)
- FASEY, WILLIAM R.; The Oaks, Holly Bush Hill, Snaresbrook, N.E. (May, 1902)
- FIELD, GEORGE; Sorrento, Staplehurst, Kent. (March, 1900).
- FIELD, Miss HILDA; Ashurst Park, Tunbridge Wells. (1912).
- FINDEISEN, A. G.; Hallow Dene, Torquay. (May, 1914).
- FINN, FRANK; c/o Grindlay & Co., 54, Parliament Street, S.W. (*Hon. Member.*)
- FIREBRACE, Mrs.; 28, Old Queen Street, Westminster, S.W. (Feb., 1911).
- FLOWER, Major STANLEY SMYTH, F.L.S., F.Z.S., M.B.O.U.; Director Egyptian Government Zoological Gardens, Ghizeli, Cairo, Egypt. (Jan., 1913).
- FLOWER, Mrs. STANLEY; Longfield, Tring, Herts. (March, 1909)
- FOLLETT, The Lady JULIA; Woodside, Old Windsor. (Oct., 1903)
- 120 FORTESCUE, Col. H.; Falmouth House, Newmarket. (Oct., 1908)
- FOSTER, E. HUBERT; Lower Bowden, Pangbourne, Berks. (1912)
- FOWLER, CHARLES; 26, Broad Street, Blaenavon. (Dec., 1894)
- FROST, WILFRID; 13, Fairlawn Avenue, Chiswick Park, W. (July, 1908).
- GALLOWAY, P. F. M.; Durban, Rectory Road, Caversham, Reading. (March, 1907).
- GHIGI, il Prof. Alessandro; Via d'Azeglio, Bologna, Italy. (March, 1911).
- GIBBS, Mrs. H. MARTIN; Barrow Court, Flax Bourton, R.S.O., Somerset. (April, 1904).
- GIBBINS, WILLIAM B.; Ettington, near Stratford-on-Avon. (June, 1895) *

- GILES, HENRY M., M. Aust. O.U. (Orig. Mem.); Zoological Gardens, Perth, Western Australia. (June, 1903).
- GODDARD, H. E.; Rothsay, Thicket Road, Sutton, Surrey. (Feb., 1899)
- 130 GODMAN, F. DUCANE, D.C.L., F.R.S., F.Z.S.; President of the British Ornithologists' Union, 45, Pont Street, S.W. Oct., 1904).
(*Honorary Member*).
- GOODALL, A. A.; 64, Park Road, West Dulwich, S.E. (Nov., 1909).
- GOODCHILD, HERBERT, M.B.O.U.; 66, Gloucester Road, Regent's Park, N.W. (Oct., 1912).
- GOSSE, Dr. PHILIP, M.R.C.S.; Curtlemead, Beaulieu, Hants. (April, 1911).
- GRABHAM, Dr. OXLEY; The Museum, York. (June, 1914).
- GRAY, HENRY, M.R.C.V.S.; 23, Upper Phillimore Place, W. (June, 1906).
- GREENING, LINNÆUS; Fairlight, Grappenhall, nr. Warrington. (Jan. 1911).
- GREGORY, Mrs.; Melville, Parkstone, Dorset. (Dec., 1901).
- GREY, Rt. Hon. Sir EDWARD, Bart, K.G., M.P.; 3, Queen Anne's Gate, S.W. (1913)
- GRIFFITHS, M. E.; Caizley House, Temple Road, Stowmarket. (May, 1902).
- 140 GRONVOLD, HENRIK; 26, Albert Bridge Road, Battersea Park, S.W. (Nov., 1902).
- GROSSMITH, J. L.; The Grange, Bickley, Kent. (Nov., 1912).
- GUILFORD, Miss H.; 23, Lenton Avenue, The Park, Nottingham. (March, 1903).
- GULBENKIAN, C. S.; 27, Quai D'Orsay, Paris. (Dec., 1908).
- GUNN, W. CECIL; The Red House, Bickley, Kent. (Jan., 1902).
- GURNEY, JOHN HENRY, F.Z.S., M.B.O.U.; Keswick Hall, Norwich; and Athenæum Club, Pall Mall, S.W. (Dec., 1904)
- HAAGNER, A. K., F.Z.S., M.B.O.U., Transvaal Museum, Pretoria, South Africa. (Nov., 1905)
- HAGGIE, G. E.; Brumcombe, Foxcombe Hill, Oxford. (June, 1914)
- HARCOURT, Rt. Hon. LEWIS, P.C.; 14, Berkeley Square, W. (1913)
- HARDING, W. A., M.A., F.Z.S., Histon Manor, Cambridge. (Dec., 1903)
- 150 HARDY, LAWRENCE, M.P.; Sandling Park, Hythe, Kent. (Nov., 1906)
- HAREWOOD, The Countess of; Harewood House, Leeds. (March, 1903)
- HARLEY, Mrs. F.; Brompton Bryan, Herefordshire. (1908)
- HARPER, EDWARD WILLIAM, F.Z.S., M.B.O.U.; 6, Ashburnham Road, Bedford. (Feb., 1901)
- HARTLEY, Mrs.; "Lynchfield," Bishops Lydeard, Somerset. (April, 1897)
- HARVEY, The Hon. Lady; Langley Park, Slough. (Oct., 1906)
- HAWKE, The Hon. MARY C.; Wighill Park, Tadcaster. (Nov., 1900)
- HAWKINS, L. W.; 206, Clive Road, West Dulwich, S.E. (Jan., 1899)

- HAYES, Miss PHYLLIS; Harcourt, Wem., Salop. (1915)
- HEBB, THOMAS; "Brooklea," The Downs, Luton, Beds. (April, 1914)
- 160 HEMSWORTH, The Rev. B., M.A., J.P.; Monk Fryston Hall, South
Milford, Yorks. (June, 1901)
- HERBERT, EDWARD G.; Bombay-Burmah Trading Co., Bangkok.
- HETLEY, Mrs. HENRY, Beaufort House, 114, Church Road, Norwood,
S.E. (July, 1910)
- HEUMANN, G. A.; Strand Arcade, George Street, Sydney, New South
Wales. (Sept., 1913)
- HEWITT, HARALD, East Sooke, Vancouver Island, B.C.
- HEYWOOD, RICHARD; Narborough, Norfolk. (Oct., 1911)
- HILL, ARTHUR W.; Director, Royal Gardens, Kew, Surrey. (Oct. 1915)
- HILL, Mrs. E. STAVELKY; Oxley Manor, Wolverhampton. (Oct., 1905)
- HINDLE, R. FRANKLIN; 34, Brunswick Road, Liverpool. (Sept., 1898)
- HODGSON, The Hon. Mrs.; Clopton, Stratford-on-Avon. (March, 1903)
- 170 HOLDEN, RALPH A., F.Z.S.; 5, John Street, Bedford Row, London.
(May, 1906)
- HOPKINSON, Dr. EMILIUS; D.S.O., M.A., M.B., Oxon.; Gambia, West
Africa; 45, Sussex Square, Brighton. (Oct., 1906)
- HOPSON, FRED C.; Northbrook Street, Newbury. (March, 1897)
- HORSBRUGH, Lieut.-Col. BOYD R., A.S.C.; Tandridge Priory, Oxted,
Surrey. (Jan., 1898)
- HOUSDEN, JAMES B.; Brooklyn, Cator Road, Sydenham, S.E. (Orig.
Mem.)
- HOWARD, ROBERT JAMES, M.B.O.U.; Shear Bank, Blackburn. (April,
1903).
- HOWARD-VYSE, H.; Stoke Place, Slough. (Nov., 1906)
- HOWMAN, Miss; 6, Essex Grove, Upper Norwood. (Mar., 1897)
- HUBBARD, GEORGE; 112, Fenchurch Street, E.C. (Jan., 1905)
- HUTCHINSON, Miss ALICE; Alderton Vicarage, Chippenham, Wilts.
(August, 1907)
- 180 INCHQUIN, The Lady; Dromoland Castle, Newmarket-on-Fergus,
County Clare, Ireland. (Nov., 1897)
- INGRAM, Capt. COLLINGWOOD; The Bungalow, Westgate-on-Sea.
(Oct., 1905)
- INGRAM, Sir WILLIAM, Bart.; The Bungalow, Westgate-on-Sea. (Sept.,
1904)
- ISAAC, CHARLES; Somerton, Bath Road, Slough. (March, 1906)
- JAMRACH, ALBERT E.; 180, St. George Street, London, E. (April, 1913)
- JEAKINS, A. E., The Studio, Simla, India. (Oct., 1915)
- JOHNSON, Major FRANK; Melrose House, Wilbury Road, Hove, Sussex.
(1912)
- JOHNSTONE, Mrs. E. J.; Burrswood, Groomsbridge, Sussex. (May, 1908)

- KEAYS, Dr. C. LOVELL; Park Lodge, East Hoathley, Sussex. (Aug., 1913)
- KUSER, J. DRYDEN; Faircourt, Bernardsville, New Jersey, U.S.A. (1912)
- 190 LANCASTER, JOHN; Dunchurch Lodge, near Rugby. (March, 1904).
- LATHAM, Miss GRACE. 3, Trevanion Road, West Kensington, W. (April, 1915).
- LEACH, C. F.; Vale Lodge, Leatherhead, Surrey. (June, 1914)
- LEE, Mrs. E. D.; Hartwell House, Aylesbury. (July, 1906)
- LEEKE, Miss DOROTHY; 9, Hertford Street, Mayfair, W. (May, 1909)
- LEICESTER, The Earl of, G.C.V.O., etc.; 15, Hill Street, Berkeley Square, W. (May, 1913)
- LEIGH, CECIL; Lyburn Park, near Lyndhurst, Hants. (Nov., 1906)
- LEMON, FRANK E.; Hillcrest, Redhill, Surrey.
- LE SOUËF, A. SHERBOURNE; Zoological Gardens, Sydney, New South Wales. (Aug., 1913)
- 200 LE SOUËF, DUDLEY; Zoological Gardens, Royal Park, Parkville, Melbourne, Australia. (1912)
- LILFORD, The Lady; Lilford Hall, Oundle, Northamptonshire. (Jan., 1898)
- LOYD, Capt. A. M.; 1/24th Regiment, Chatham Barracks, Chatham. (April, 1912)
- LOCKYER, ALFRED; St. Monica's Lodge, Elm Park Road, Winchmore Hill, N. (Dec., 1905)
- LONG, Mrs.; Sherrington Manor, Berwick, Sussex. (Feb., 1907)
- LOVLACE, The Countess of; Wentworth House, Chelsea Embankment, London, S.W. (May, 1906)
- LOVETT, C.; Route 3, Brentwood, Tennessee, U.S.A. (Dec., 1912)
- LOW, GEORGE E.; 14, Royal Terrace East, Kingstown, Ireland. (Mar., 1913).
- LUCAS, Dr. N. S.; 19, Westbourne Terrace, Hyde Park, W. (Jan., 1913)
- MANCHESTER PUBLIC LIBRARIES; Reference Library, Piccadilly, Manchester. (July, 1913)
- 210 McDONNELL, Hon. Sir SCHOMBERG, G.C.V.O.; Dalness, Taynuilt, Argyllshire. (March, 1914).
- MCGEAGH, Dr. R. T.; Mona Lodge, Lezayre, nr. Ramsey, Isle of Man. (Aug., 1968).
- MCGEE, The Rev. Father; St. Laurences, Forbes, N.S.W. (July, 1908)
- MALONE, Mrs. M. L'ESTRANGE; West Lodge, Malton, Yorks. (Jan., 1902)

- MANNERS-SMITH, Lieut.-Col.; The Residency, Nepal, India. (1911)
- MAPPIN, STANLEY; 12, Albert Hall Mansions, Kensington Gate, S.W. (April, 1911)
- MARLOW, R.; 115, Manchester Road, Denton, Lancs. (Jan., 1915)
- MARSHALL, ARCHIBALD MCLEAN; Chitcombe, Brede, Sussex. (Jan., 1906)
- MARTIN, H. C.; 147, Victoria Road, Old Charlton, Kent; and Saladero, Liebig, Fray Bentos, Uruguay. (Jan., 1897)
- MARTORELLI, Professore GIANCINTO, M.B.O.U., etc.; Collezione Turati, Museo Civico di Storia Naturale, Milan, Italy. (July, 1906). (*Honorary Member*).
- 220 MASON, D., 23, Prince of Wales Terrace, Kensington, W. (June, 1914)
- MATHEWS, GREGORY M., F.R.S., Edin., F.L.S., Foulis Court, Fair Oak, Hants. (Dec., 1909)
- MAUD, Mrs. CHARLES E.; Monterey, California. (July, 1913)
- MEADE-WALDO, E. G. B., F.Z.S., M.B.O.U.; Stonewall Park, Edenbridge, Kent. (Jan., 1895)
- MEDLAND, Miss LILIAN M.; 10, Newcastle House, Northumberland Street, W. (Oct., 1913)
- MERCER, WILLIAM; Doylestown, Pennsylvania, U.S.A. (March, 1913)
- MILLS, The Hon. VIOLET; The Wilderness, Sevenoaks. (Oct., 1907)
- MILLSUM, O.; 79, Northdown Road, Cliftonville, Margate. (Aug., 1909)
- MITCHELL, HARRY; Haskells, Lyndhurst, Hants. (Feb., 1904)
- MOERSCHELL, F.; Elmcote, Watford. (June, 1895)
- 230 MOMBER, Mrs.; 77, Harley Street, W. (Sept., 1907)
- MONTAGU, Hon. E. S., M.P., M.B.O.U.; 59, Bridge Street, Cambridge and 12, Kensington Palace Gardens, W. (May, 1912)
- MONTGEON, Mdlle. de; Covertside, Hasfield, Gloucester. (Oct., 1913)
- MORGAN, Hon. EVAN F.; 37, Bryanston Square, W. (1912)
- MORRISON, Hon. Mrs. McLAREN; Queen Anne's Mansions, St. James's Park, S.W. (Sept., 1911)
- MORSHHEAD, Lady; Forest Lodge, Binfield, Bracknell, Berks. (Dec., 1894) *
- MORTIMER, Mrs.; Wigmore, Holmwood, Surrey. (Orig. Mem.)*
- MUNDY, Miss SYBIL MILLER; Shipley Hall, Derby. (Jan., 1909)
- MUNT, HENRY; 10, Ashburn Place, S. Kensington, S.W. (1912)
- MYLAN, Dr. JAS. GEORGE, B.A., M.B. (Univ. Col.); L.R.C.P. & L.R.C.S. (Ed.) &c., 90, Upper Hanover Street, Sheffield. (Dec., 1901)
- 240 NEWALL, Mrs.; Red Heath, Croxley Green, R.S.O., Herts. (June, 1911)
- NEWMAN, T. H., F.Z.S., M.B.O.U.; Newlands, Harrowdene Road, Wembley, Middlesex. (May, 1900). (*Hon. Secretary*).
- NBW MARSH, C. T., at Gamages Ltd.; Holborn, W.C. (Aug., 1915)

- NICHOLS, WALTER B., M.B.O.U.; Stour Lodge, Bradfield, Manningtree (Jan., 1907)
- NICOLL, MICHAEL J., M.B.O.U.; Zoological Gardens, Ghizeh, Cairo, Egypt. (1906)
- OAKBY, W.; 34, High Street, Leicester. (March, 1896)*
- OBERHOLSER, HARRY C.; 1444, Fairmount Street, N.W., Washington, D.C., U.S.A. (Oct., 1903)
- OGILVIE-GRANT, W. R., F.Z.S., M.B.O.U.; British Museum (Nat. Hist.) Cromwell Road, S.W. (Dec., 1903)
- OGLE, BERTRAM SAVILLE, M.B.O.U.; Steeple Aston, Oxford. (Dec., 1902)
- ONSLow, The Countess of; Clandon Park, Guildford, Surrey. (July, 1910)
- 250 O'REILLY, NICHOLAS S.; 144, Eastern Road, Kemp Town, Brighton. (Dec., 1894)
- OSTREHAN, J. ELLIOTT D.; Bank House, Thame, Oxon. (April, 1903)
- PAGE, WESLEY T., F.Z.S.; Glenfield, Graham Avenue, Mitcham, Surrey. (May, 1897)
- PAINTER, K. V.; 2508 Euclid Avenue, Cleveland, Ohio, U.S.A. (Dec., 1909)
- PAM, ALBERT, F.Z.S.; Wormley Bury, Broxbourne, Herts. (Jan., 1906)
- PAM, HUGO, C.M.Z.S.; 65, Bishopsgate, E.C. (Sept. 1911)
- PARKIN, THOMAS, M.A., F.R.G.S., F.Z.S., M.B.O.U.; Fairseat, High Wickham, Hastings. (Oct., 1903)
- PIER, P.; c/o Taxation Department, George Street North, Sydney, N.S.W. (July, 1903)
- PENNANT, The Lady EDITH DOUGLAS; Soham House, Newmarket, Cambs. (Sept., 1908)
- PENROSE, FRANK G., M.D., F.Z.S., M.B.O.U.; Athenæum Club, Pall Mall, S.W. (Dec., 1903).
- 260 PERREAU, Major G. A.; 2/4 Gurkha Rifles, Bakloh, Punjab, India. (Dec., 1903)
- PERCY, The Lord WILLIAM; Alnwick Castle, Alnwick. (May, 1913)
- PERRING, C. S. R.; 1, Claremont Avenue, New Malden, Surrey.
- PHILLIPS, JOHN C.; Knobfields, Wenham, Mass, U.S.A. (March, 1910)
- PHILLIPS, Mrs. E. LORT, F.Z.S.; 79, Cadogan Square, S.W. (April, 1907)
- PICHOT, M. PIERRE A.; 132, Boulevard Hausmann, Paris. (Sept., 1910)
- PICKFORD, RANDOLF JOHN; Thorn Lea, Carmel Road, Darlington.
- PIKE, L. G.; Kingsbarrow, Wareham, Dorset. (1912)
- POCOCK, R. I., F.R.S., F.L.S., F.Z.S., M.B.O.U.; Zoological Society's Gardens, Regent's Park, N.W. (Feb., 1904)
- PORTAL, MAURICE; High Sandhoe, Hexham. (April, 1913)

- 270 POTTER, Dr. BERNARD E.; 58, Park Street, W. (March, 1914)
 POWIS, The Earl of; 45, Berkeley Square, W.; and Powis Castle, Welshpool. (April, 1902)
 PRINCETON UNIVERSITY, LIBRARY OF; Princeton, New Jersey, U.S.A. (Nov., 1907)
 PYCRAFT, W. P., A.L.S., F.Z.S., M.B.O.U., etc.; British Museum (Nat. Hist.) Cromwell Road, S.W. (Nov., 1904). (*Hon. Member*).
- QUINCKY, RICHARD S. de Q.; Inglewood, Chislehurst, Kent. (April, 1913)
- RADCLIFFE, Captain A. DELMÉ, 105th Maratha Light Infantry, Poona, India.
- RATHBORNE, HENRY B.; Dreenan, Boa Island, Pettigo, Co. Fermanagh. (May, 1901).
- RATTIGAN, G. E.; Lanarkslea, Cornwall Gardens, S.W. (August, 1908).
- RECKMAN, PHILIP; Brookmead, Windsor Road, Bray, Berks. (July, 1915)
- REID, Mrs.; Funchal, Madeira. (Feb., 1895)
- 280 RENSHAW, Dr. GRAHAM, M.B., M.R.C.S.; Bridge House, Sale, Manchester. (Jan., 1910)
- RICK, Captain G.; Persey House, Blairgowrie, N.B. (May, 1912)
- RILEY, JOSEPH H.; U.S. National Museum, Washington, D.C., U.S.A. (June, 1906)
- RITCHIE, NORMAN; The Holmes, St. Boswell's, N.B. (Feb., 1903)
- ROBBINS, HENRY; (*Address Unknown*). (April, 1908)
- ROBERTS, Mrs., C.M.Z.S., M. Aust. O.U.; Beaumaris, Montpelier Street, Hobart, Tasmania. (June, 1903)
- ROGERS, Lt.-Col. J. M., D.S.O., F.Z.S., M.B.O.U. (late Royal Dragoons); Riverhill, Sevenoaks. (April, 1907)
- ROGERSON, A.; Fleurville, Ashford Road, Cheltenham. (Dec., 1902)
- ROTHSCHILD, Hon. LIONEL DE, M.P., 46, Park Street, W. (Nov., 1913)
- ROTHWELL, JAMES E.; 153, Sewall Avenue, Brookline, Mass., U.S.A. (Oct., 1910)
- 290 ROYAL ZOOLOGICAL SOCIETY OF IRELAND, Phoenix Park, Dublin. (Oct., 1905)
- ST. QUINTIN, WILLIAM HERBERT, F.Z.S., M.B.O.U.; Scampston Hall, Rillington, York. (Orig. Mem.)
- SCLATER, W. L., M.A., F.Z.S.; 10, Sloane Court, S.W. (August, 1904)
- SCOTT, B. HAMILTON; Hamildean, Ipswich. (1912)
- SÉGUR, M. LE COMTE DE; 45, Avenue d'Jéna, Paris. (Sept., 1913)
- SEPPINGS, Captain J. H. W.; The Army Pay Office, Dover. (Sept., 1907)
- SARGEANT, A. ST. GEORGE, Exbury, Padstow, Cornwall. (June, 1915)

- SETH-SMITH, DAVID, F.Z.S., M.B.O.U.; 34, Elsworthly Road, South Hampstead, N.W. (Dec., 1894)
- SETH-SMITH, LESLIE, M., B.A., M.B.O.U.; Alleyne, Caterham Valley, Surrey; and Kampala, Uganda. (July, 1912)
- SEBAG-MONTEFIORE, Mrs.; 2, Palace Houses, W. (1913)
- 300 SICH, HERBERT LEONARD; Corney House, Burlington Lane, Chiswick, W. (Feb., 1902)
- SILVER, ALLEN, The Laurels, 7, Bampton Road, Forest Hill, S.E. (August, 1904)
- SIMPSON, ARCHIBALD; Oakfield House, Stanks, Crossgates, nr. Leeds. (Feb., 1901)
- SMALLEY, F. W., F.Z.S., M.B.O.U.; Challan Hall, Silverdale, near Cainforth, Lancs. (1912)
- SMITH, C. BARNBY; Woodlands, Retford. (August, 1906)
- SMITH, Miss DORRIEN; Tresco Abbey, Isles of Scilly, Cornwall. (August, 1908)
- SMITH, NORMAN; Kilcreggan, Bowen Road, Hale, Altrincham, Cheshire. (March, 1915)
- SMITH, O. C.; 73, Audley Street, Reading. (March, 1915)
- SOUTHESK, The Countess of; Kinnaird Castle, Brechin, N.B. (Feb., 1901)
- SOUTHPORT CORPORATION; Curator of; Hesketh Park, Southport. (Jan., 1904)
- 310 SPENCE G. O.; Elmwood, Hartburn, Stockton on Tees. (1913)
- SPRANKLING, E.; Brookland Cottage, South Road, Taunton. (Feb., 1914)
- STANSFIELD, Captain JOHN; Dunninald, Montrose, N.B. (Dec., 1896)
- STAPLES-BROWNE, R.; Bampton, Oxfordshire. (August, 1898)
- STEVENS, H.; Gopaldara, Nagri Spur, P.O. Darjeeling Himal. Ry. Sonada, India. (Oct., 1911)
- STOCKPORT CORPORATION; Superintendent; Vernon Park, Stockport. (Oct., 1902)
- STONE, O. J.; Cumnor, The Drive, Lawrie Park, Upper Sydenham, S.E. (March, 1914)
- STURTON-JOHNSON, Miss, Oratava House, Ore, Hastings. (May, 1897)
- SUFFOLK and BERKSHIRE, The Countess of; Charlton Park, Malmesbury. (Feb., 1909)
- SUGGITT, ROBERT; Suggitt's Lane, Cleethorpes, Grimsby. (Dec. 1903)
- 320 SUTCLIFFE, ALBERT; Fairholme, Grimsby. (Feb., 1906)
- SUTTON, Lady; Brinsop Court, Hereford. (Dec., 1901)
- SWAYSLAND, WALTER; 47, Queen's Road, Brighton. (Orig. Mem.) *
- TAKA-TSUKASA, Mr.; 25, Kaninibancho, Kojimachi, Tokyo, Japan. (Feb., 1914)

- TANNER, Dr. FRANK L.; Vanvert House, Guernsey. (Jan., 1914)
- TAVISTOCK, The Marquis of; 19, Hanover Square, London, W. (1912)
- TEMPLE, W. R.; Ormonde, Datchet, Bucks. (June, 1907)
- TERRY, Major HORACE A., M.B.O.U. (late Oxfordshire Light Infantry);
Compton Grange, Compton, Guildford. (Oct., 1902)
- TESCHEMAKER, W. E., B.A.; Ringmore, Teignmouth, Devon. (May,
1904)
- THOM, ALFRED A.; The Citadel, Weston, near Shrewsbury. (June,
1913)
- 330 THOMAS, F. INIGO; 2, Mulberry Walk, Church Street, Chelsea, S.W.
(June, 1914)
- THOMAS, HENRY; 15, Clinning Road, Birkdale, Southport. (Jan., 1895)
- THOMAS, Miss F. G. F.; Weston Hall, Towcester, Northants. (March,
1899)
- THOMASSET, BERNARD C., F.Z.S.; The Manor House, Ashmansworth,
near Newbury. (*Hon. Treasurer*). (July, 1896)
- THOMASSET, H. P.; Cascade Estate, Mahé, Seychelles. (Nov., 1906)
- THOMPSON, Mrs. F. F.; Canandaigua, N.Y., U.S.A. (July, 1907)
- THORNILEY, PERCY WRIGHT; Shooter's Hill, Wem., Shrewsbury,
(Feb., 1902)
- THORPE, CHARLES; Selborne, Springfield Road, Wallington, Surrey.
(Dec., 1901)
- TICEHURST, Dr. C. B.; Grove House, Lowestoft. (1912)
- TICEHURST, NORMAN FREDERICK, M.A., M.B., F.R.C.S., F.Z.S., 35,
Pevensey Road, St. Leonards-on-Sea. (Dec., 1906)
- 340 TOWNSEND, STANLEY M.; 3, Swift Street, Fulliam. (Sept., 1898)
- TRENOW, EVELYN HENRY, F.Z.S.; Ivy Lodge, Epping, Essex. (Nov.,
1910)
- TRESTRAIL, Mrs.; Southdaile, Clevedon. (Sept., 1903)
- TREVOR-BATTYE, AUBYN, B. R., M.A., F.L.S.; Ashford Chace,
Petersfield, Hants. (July, 1898).
- TUCKWELL, EDMUND H.; Berthorpe, Compton, near Guildford, Surrey.
(1912)
- TURNER, Mrs. TURNER; Abbey Spring, Beaulieu, Hants. (July, 1910)
- TWEEDIE, Major W., Arg. and Suth. Highlanders; c/o Cox & Co., 16,
Charing Cross, S.W. (April, 1903)
- URWICK, DOUGLAS R.; St. Cross Mill, Winchester. (March, 1913)
- VALENTINE, ERNEST; 7, Highfield, Workington. (May, 1899)
- VAN OORT, Dr. E. D.; Museum of Natural History, Leiden, Holland.
- 350 VAN SOMEREN, Dr.; Nairobi, British East Africa. (June, 1915)

- WACHSMANN, A. E. ; " Maitai," Murray Road, Beecroft, New South Wales, Australia. (August, 1914)
- WADDELL, Miss PEDDIE ; 4, Great Stuart Street, Edinburgh, N.B. (Feb, 1903)
- WAIT, Miss L. M. St. A. ; 12, Rosary Gardens, S.W. (Feb., 1909)
- WALKER, Miss H. K. O. ; Chesham, Bury, Lancs. (Feb., 1895)
- WALKER, Miss ; Persey House, Blairgowrie, N.B. (Jan., 1903)
- WALLACE, Mrs. WILLIAMSON ; Kelton, Dumfries. (1912)
- WALLOP, The Hon. FREDERICK ; (*No Address*). (Feb., 1902)
- WATERFIELD, Mrs. NOEL E. ; Blyburgate House, Beccles ; and Port Soudan, Red Sea. (Sept., 1904)
- WATTS, R. J. ; " Sunnyside," St. Peter's Road, Huntingdon. (Feb., 1914)
- 360 WAUD, Capt. P REGINALD ; Hoe Benham, near Newbury. (May, 1913)
- WELLINGTON, Her Grace the Duchess of ; Ewhurst Park, Basingstoke. (Oct., 1913)
- WHITAKER, JOSEPH I. S., F.Z.S., M.B.O.U. ; Malfitano, Palermo, Sicily (August, 1903)
- WHITE, STEPHEN J. ; Lloyd's, London, E.C. (Oct. 1913)
- WHITEHEAD, Mrs. HENRY ; Haslem Hey, Bury, Lancs. (March, 1902)
- WHITEHEAD, JEFFERY ; Mayes, East Grinstead, Sussex (1912)
- WHITLAW, Miss ROSA M. ; Amerden, Taplow. (August, 1914)
- WIGLESWORTH, JOSEPH, M.D., MB.O.U. ; Springfield House, Winscombe, Somerset. (Oct., 1902)
- WILKINSON, JOHN ; The Grange, Kirkcudbright, Scotland. (Dec., 1914)
- WILLFORD, HENRY ; Upland View, Havenstreet, Ryde, Isle of Wight. (Nov., 1907)
- 370 WILLIAMS, Mrs. C. H. ; Emmanuel Parsonage, Exeter. (May, 1902)
- WILLIAMS, Mrs. HOWARD ; 24, Harley House, Regent's Park, N.W. (April, 1902)
- WILLIAMS, SIDNEY, Jun., F.Z.S. ; Holland Lodge, 275, Fore Street, Edmonton, N. (Feb., 1905)
- WILSON, Dr. MAURICE ; Walton Lodge, Pannal, Harrogate. Oct., 1905)
- WILSON, T. NEEDHAM ; Harrow Lodge, Bransgore, Christchurch, Hants. (Dec., 1901)
- WINCHELSEA and NOTTINGHAM, The Countess of ; Harlech, Merioneth. (April, 1903)
- WOLFE, Miss GEORGINA ; S. John, 57, Granada Road, E. Southsea. (August, 1904)
- WOODWARD, KENNETH N. ; 1, Madison Avenue, New York, U.S.A. (March, 1915)
- WOOLRIDGE, Prof. G. H., F.R.C.V.S. ; Ypsilanti, 13, St. Andrew's Road, Golder's Green, N.W. (1912)

- WORKMAN, WM. HUGHES, M.B.O.U. ; Lismore, Windsor, Belfast.
(May, 1903)
- 380 WORMALD, HUGH ; The Heath, Dereham, Norfolk. (Dec., 1904).
- WRIGHT, R. N. ; Church Hill, Robert Road, Handsworth, near Bir-
mingham (Dec., 1908)
- YEALLAND, JAMES ; Binstead, Isle of Wight. (July, 1913)
- YOUNGER, Miss BARBARA HENDERSON ; 4, Douglas Gardens, Edin-
burgh. (July, 1909)
- YULE, Lady ; Hanstead House, Bricket Wood, Herts. (Feb., 1914)
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Rules of the Avicultural Society.

As amended January, 1908.

1.—The name of the Society shall be THE AVICULTURAL SOCIETY and its object shall be the study of Foreign and British Birds in freedom and in captivity. Poultry, Pigeons and Canaries shall be outside the scope of the Society. The year of the Society, with that of each volume of the Society's Magazine, which shall be known as *The Avicultural Magazine*, shall commence with the month of November and end on the 31st of October following.

2.—The Avicultural Society shall consist of Ordinary and Honorary Members; and the latter shall be restricted in number to six, and be elected by the Council.

3.—The Officers of the Society shall be elected, annually if necessary, by members of the Council in manner hereinafter provided and shall consist of a President, one or more Vice-Presidents, a Business Secretary, a Correspondence Secretary, an Editor, a Treasurer, an Auditor, a Scrutineer, and a Council of fifteen members. The Secretaries, Editor, and Treasurer, shall be *ex officio* Members of the Council,

4.—New Members shall be proposed in writing, and the name and address of every person thus proposed, with the name of the Member proposing him, shall be published in the next issue of the Magazine. unless the candidate shall, within two weeks after the publication of his name in the Magazine, be objected to by at least two Members, he shall be deemed to be duly elected. If five Members shall lodge with the Business Secretary objections to any candidate he shall not be elected, but the signatures to the signed objections must be verified by the Scrutineer. If two or more Members (but less than five) shall object to any candidate, the Secretary shall announce in the next number of the Magazine that such objections have been lodged (but shall not disclose the names of the objectors), and shall request the Members to vote upon the question of the election of such candidate. Members shall record their votes in sealed letters addressed to the Scrutineer, and a candidate shall not be elected unless two thirds of the votes recorded be in his favour; nor shall a candidate be elected if five or more votes be recorded against his election.

5.—Each Member shall pay an annual subscription of 10/-, to be due and payable in advance on the 1st of November in each year. New Members shall pay in addition, an entrance fee of 10/6; and, on payment of their entrance fee and subscription, they shall be entitled to receive all the numbers of the Society's Magazine for the current year.

6.—Members intending to resign their membership at the end of the current year of the Society are expected to give notice to the Business Secretary before the first of October, so that their names may not be included in the "List of Members," which shall be published annually in the November number of the Magazine.

7.—The Magazine of the Society shall be issued on or about the first day of every month,* and forwarded, post free, to all the Members who shall have paid their subscriptions for the year: but no Magazine shall be sent or delivered to any Member until the annual subscription shall have reached the hands of the Business Secretary or the Publishers. Members whose subscriptions shall not have been paid as above by the first day in September in any year shall cease to be Members of the Society, and shall not be re-admitted until a fresh entrance fee, as well as the annual subscription, shall have been paid.

8.—The Secretaries, Editor, and Treasurer shall be elected for a term of five years, and should a vacancy occur, it may be temporarily filled up by the Executive Committee (see Rule 10). At the expiration of the term of five years in every case, it shall be competent for the Council to nominate the same officer, or another Member, for a further term of five years, unless a second candidate be proposed by not less than twenty-five members of at least two years standing, as set forth below.

In the September number of the Magazine preceding the retirement from office of the Secretaries, Editor, or Treasurer, the Council shall publish the names of those gentlemen whom they have nominated to fill the vacancies thus created; and these gentlemen shall be deemed duly elected unless another candidate or candidates be proposed by not less than fifteen Members of at least two years standing. Such proposal, duly seconded and containing the written consent of the nominee to serve, if elected, in the capacity for which he is proposed, must reach the Business Secretary, on or before the 15th of September.

The Council shall also publish yearly in the September number of the Magazine the names of those gentlemen nominated by them for the posts of Auditor and Scrutineer respectively.

9.—The Members of the Council shall retire by rotation, two at the end of each year of the Society (unless a vacancy or vacancies shall occur otherwise) and two other Members of the Society shall be recommended by the Council to take the place of those retiring. The names of the two Members recommended shall be printed in the September number of *The Avicultural Magazine*. Should the Council's selection be objected to by fifteen or more Members, these shall have power to put forward two other candidates whose names, together with the signatures of no less than

*Owing to the extra pressure of work, the October and November numbers are liable to be late.

fifteen Members proposing them, must reach the Hon. Business Secretary by the 15th of September. The names of the four candidates will then be printed on a voting paper and sent to each Member with the October number of the Magazine, and the result of the voting published in the November issue. Should no alternative candidates be put forward, in the manner and by the date above specified, the two candidates recommended by the Council shall be deemed to have been duly elected. In the event of an equality of votes the President shall have a casting vote.

If any Member of the Council does not attend a meeting for two years in succession, the Council shall have power to elect another Member in his place.

10.—Immediately after the election of the Council, that body shall proceed to elect three from its Members (*ex officio* Members not being eligible). These three, together with the Secretaries and Editor, shall form a Committee known as the Executive Committee. Members of the Council shall be asked every year (whether there has been an election of that body or not) if they wish to stand for the Executive, and in any year when the number of candidates exceeds three there shall be an election of the Executive.

The duties of the Executive Committee shall be as follows:

- (i). To sanction all payments to be made on behalf of the Society.
- (ii). In the event of the resignation of any of the officers during the Society's year, to fill temporarily the vacancy until the end of the year. In the case of the office being one which is held for more than one year (*e. g.* Secretaries, Editor, or Treasurer, the appointment shall be confirmed by the Council at its next meeting.
- (iii). To act for the Council in the decision of any other matter that may arise in connection with the business of the Society.

The decision of any matter by the Executive to be settled by a simple majority (five to form a quorum). In the event of a tie on any question, such question shall be forthwith submitted by letter to the Council for their decision.

The Executive shall not have power

- (i). To add to or alter the Rules;
- (ii). To expel any Member;
- (iii). To re-elect the Secretaries, Editor, or Treasurer for a second term of office.

It shall not be lawful for the Treasurer to pay any account unless such account be duly initialed by the Executive.

It shall be lawful for the Business Secretary or Editor to pledge the Society's credit for a sum not exceeding £15.

Should a Member wish any matter to be brought before the *Council* direct, such matter should be sent to the Business Secretary with a letter stating that it is to be brought before the Council at their next meeting otherwise communications will in the first place be brought before the Executive.

A decision of a majority of the Council, or a majority of the Executive endorsed by the Council, shall be final and conclusive in all matters.

11.—The Editor shall have an absolute discretion as to what matter shall be published in the Magazine (subject to the control of the Executive Committee). The Business Secretary and Editor shall respectively refer all matters of doubt and difficulty to the Executive Committee.

12.—The Council (but not a Committee of the Council) shall have power to alter and add to the Rules, from time to time, in any manner they may think fit. Five to form a quorum at any meeting of the Council.

13.—The Council shall have power to expel any Member from the Society at any time without assigning any reason.

14.—Neither the Office of Scrutineer nor that of Auditor shall be held for two consecutive years by the same person.

15.—The Scrutineer shall not reveal to any person how any Member shall have voted.

The Society's Medal.

RULES.

The Medal may be awarded at the discretion of the Committee, to any Member who shall succeed in breeding, in the United Kingdom, any species of bird which shall not be known to have been previously bred in captivity in Great Britain or Ireland. Any Member wishing to obtain the Medal must send a detailed account for publication in the Magazine within about eight weeks from the date of hatching of the young and furnish such evidence of the facts as the Executive Committee may require. The Medal will be awarded only in cases where the young shall live to be old enough to feed themselves, and to be wholly independent of their parents.

The account of the breeding must be reasonably full so as to afford instruction to our Members, and should describe the plumage of the young and *be of value as a permanent record of the nesting and general habits of the species*. These points will have great weight when the question of awarding the Medal is under consideration.

The parents of the young must be the *bona fide* property of the breeder. An evasion of this rule, in any form whatever, will not only disqualify the breeder from any claim to a Medal in that particular instance, but will seriously prejudice any other claims he or she may subsequently advance for the breeding of the same or any other species.

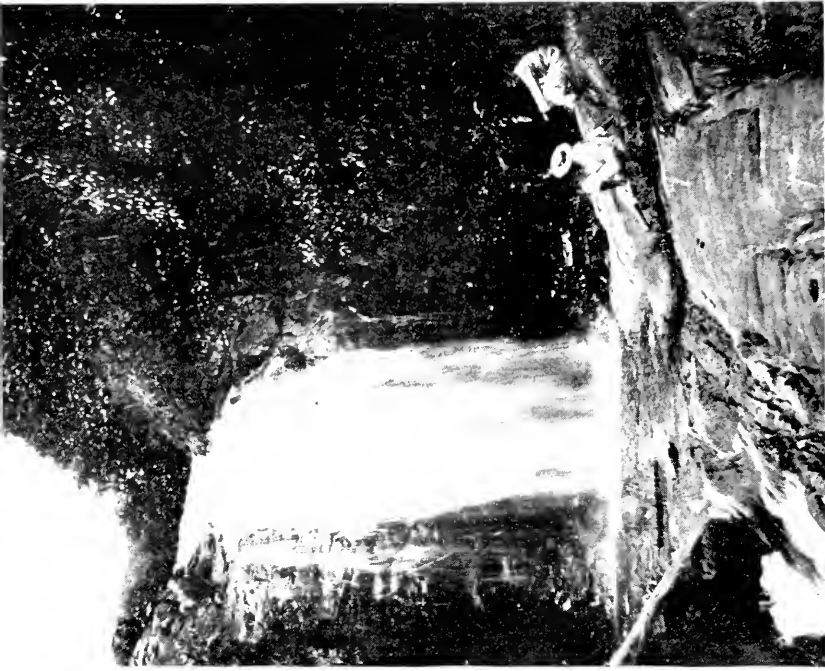
In every case the decision of the Committee shall be final.

The Medal will be forwarded to each Member as soon after it shall have been awarded as possible.

The Medal is struck in bronze (but the Committee reserve the right to issue it in *silver* in very special cases), and measures $2\frac{1}{2}$ inches in diameter. It bears on the obverse a representation of two birds with a nest containing eggs, and the words "The Avicultural Society—founded 1894." On the reverse is the following inscription: "Awarded to (*name of recipient*) for rearing the young of (*name of species*), a species not previously bred in captivity in the United Kingdom."



BREEDING-PLACE OF *Ibis alboti* AND *Alcedonias minor* ON
ALDABRA ISLAND, SOUTH INDIAN OCEAN.



HOME OF *Alcedonias pulcherrima*. WATERFALL, CASCADE ESTATE,
MAHÉ, SEYCHELLES.

Photos by Mr. E. G. B. Meade Waldo

THE
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 BEING THE JOURNAL OF
 THE AVICULTURAL SOCIETY.

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THE RED-CROWNED PIGEON.

Alectrænas pulcherrima.

By E. G. B. MEADE-WALDO.

In the December number of the "Avicultural Magazine" (1914) is an article on the pigeon hollandais, by Dr. Graham Renshaw. It interested me very much, as it referred to a pigeon that I, in company with Mr. M. I. Nicoll, procured on the Island of Mahé, Seychelles, in the spring of 1906, when cruising with the late Lord Crawford on the yacht "Valhalla." During this cruise we had the good fortune to become acquainted with three out of the four existing species of this group of pigeons. The fifth species (*Alectrænas nitidissima*), of Mauritius, having become extinct, it was by far the largest and most beautiful of all. The fourth species (*Alectrænas madagascariensis*) we did not see, although we were in Madagascar. It is a large bird, the hackle much darker in colour, and has a dark red tail, rump, and under tail coverts.

The bird referred to by Dr. Renshaw was one of three that we brought home, and lived for some time in the Western Aviary. We saw many of these birds on the Cascade Estate, which belongs to Mr. Thomasset, who is a member of this Society, and where, in common with others of the very interesting peculiar species, they are carefully preserved. Like all the native birds, this species is quite fearless. Those we procured being caught by the simple method of slipping a noose over their heads when sitting on a branch. Its natural food consists of various fruits, principally small figs.

We saw this bird also on Félicité Island, and it is found also

on the Island of Silhouette, but we did not see it in Praslin, although I believe it is there. We however saw the extremely rare parrot (*Coracopsis barkleyi*). This pigeon is a bird of high forest and has a loud coo, it rises and falls in its flight in the manner of our own woodpigeon. Those we had alive throve well, so long as their native berries lasted, but the cut up banana did not really suit them as it is sticky and collects and dries on the angle of the gape. The best food we found to be sultanas squeezed out once in hot water. So long as the indigenous forest remains these beautiful pigeons are in no danger of extermination, as there is a strong feeling in these Islands for preserving all the native fauna; the only danger is that the planting of rubber will greatly restrict the area that is suited to them. It is devoutly to be hoped that the wonderful fauna of these Islands will in part be preserved for all future generations.

Of the other two species, we saw first *Alectrænas sganzini*, on the Island of Mayatte, one of the Comoro group; it appeared to be rare, as there was not a great deal of the old forest left; it was quite tame and hard to see as it sat still in the trees.

The other species we saw was *Alectrænas minor*, which is found only on the Island of Aldabra, an island ever famous as the home of the gigantic land tortoise. This pigeon is a small edition of the Comoro bird, but is also a little lighter in colour on the back.

The day when we procured *A. minor* was one of the most interesting I ever spent in my life. We made a long trip on the launch to visit the home of *Ibis abbotti*, that very rare ibis that is peculiar to this spot. We had a most interesting time with these birds, which were so fearless that they had no objection to being picked up, and when held in the hand did not struggle, but probed with their bills round our belts. When on the ground they searched inside our shoes. To photograph them was difficult, for they insisted on perching on the camera; however, we got some beautiful pictures of them later on.* When standing under their nesting trees (some kind of *figus*) watching the cocoa-nut crabs (*Birgus latro*) some small pigeons came into the trees to feed on the figs. We procured five of these; they were *Alectrænas minor*.

* See "Avic. Mag." March, 1907, p. 144.

BREEDING OF THE LESSER SAFFRON FINCH.

Sycalis minor.

By MAURICE AMSLER, M.B.

Most of us have kept and bred the common Saffron finch, a few also have owned *Pelselus* Saffron finch; personally I have avoided the former species as they are inclined to be quarrelsome, and have, moreover, little beyond their colour to recommend them. *Pelselus*, on the other hand, I have bred from a pair reared in Mr. Teschemaker's aviaries, these were, I believe, the first to be bred in captivity; they were quiet, unobtrusive birds, but less handsome than the common species.

Last autumn I was offered a pair of saffrons, which are the subject of this article.

"Lesser Saffron" sounded attractive, and on arrival they were quite equal to my expectations. The bird in size is about equal to a linnet, and the female closely resembles this species in colour as well as in size; the cock, however, is in shape a much more "reachy" bird and reminds one constantly of a Yorkshire canary, being long, thin, and elegant, with yellow head and underparts, and olive green back and flights.

As long as they were caged they displayed no characteristic or interesting traits, but towards the end of January I gave them partial liberty by turning them into the shelter of one of my aviaries without access to the outer flight, and a month later they had the surprise of their lives when the door was opened and they found themselves amongst growing bushes and green sprouting grass.

I soon discovered that the male bird at any rate was not to be done out of his courting season. With outspread quivering wings and distended throat he followed the female in all her movements. I am not one of those who can attempt to describe a bird's song in words, but this bird's performance is an extremely pleasing trill, very soft, and sometimes rising so high in the scale as to be almost inaudible; there is nothing monotonous about it, nor are any of the notes "scroopy" and disagreeable like those of the common saffron finch.

In April I noticed the male carrying nesting material, but could not locate the nest.

On May 23rd I discovered a huge nest, built amongst some twiggy branches inside the shelter and almost touching the roof. It was quite a foot in diameter and was composed of straw and wood wool; owing to the proximity of the roof it was difficult to inspect, but by means of a ladder and some manipulation I was able to look inside and found that this large collection of straw was really the foundation of a cup some three inches in diameter, which was neatly and solidly woven of roots and other fibres. The nest contained three eggs—the size of a Zebra finches'—of a faint grey blue colour, spotted especially at the blunt end with reddish brown. Owing to the insecurity of the straw foundation the young hatched some days later were thrown out.

On June 30th the nest had been mended and contained one egg. No more were added, but, on July 12th, the hen was sitting on four eggs, one of which may have been the original and probably addled egg. As the hen was usually to be seen in the day time and the cock made his appearance in the evening I presume that the male does the incubation by day.

On July 22nd three chicks made their appearance; they were dark brown, covered with down of the same colour; gape, bright orange.

On July 30th, to my dismay and disappointment, the hen saffron was picked up dead, below the nest. I had little hope of the male continuing his duties single-handed, and almost decided to take the young to hand-rear. I elected however to give the cock a chance, and placed a ladder in position so as to keep the young under supervision: all seemed to be going well that day and the next, and I realised that the widower was finding solace for the loss of his spouse in the care of his offspring.

Had the hen died a day or two earlier the young birds would never have survived, for the male bird had no idea of brooding at night and the nestlings had to shift through the night and cold hours of early morning as best they could.

Beyond the disappearance of one chick all went well, and, on August 2nd, three days after the loss of their mother, both left

the nest at the age of eleven days; again the insecurity of the nest might have caused a fiasco, for on inspecting the nest, which, by the way, I had lately propped up, I found it hanging down and almost inverted. The nestlings, however, appeared to be quite vigorous and fitted for the outer world, one especially being quite strong on the wing.

On the evening of this day I placed them both in a deep wooden box in the shelter, where the male bird could feed them, but out of which they were not strong enough to fly; here they spent the night safely and out of the rain which was driving hard outside, and on the following morning they were allowed to take their chance.

General colour at 14 days. back, head, and flights, dark brown, with slight suggestion of olive; dark buff tips to feathers of mantles and tertiaries; throat and chest, yellowish white, with dark vertical streakings; abdomen, light yellow; irides and beak, dark brown; feet, flesh colour.

As to the food employed, I can only state definitely that the male used a few mealworms, these he was quite eager about, although they were never touched before the young were hatched. I believe he also took hemp, maw, and green wheat in the ear, beside the ordinary stock millet and canary seed. Live ants' eggs and "soft food" were absolutely ignored.

At the age of six weeks, both young birds had lengthened out and were much the same shape as their father, the streaking on the breast had practically disappeared, but both still showed a distinct tendency to yellowness on abdomen and chest. I fear, therefore, that both are males, and that it will be impossible to perpetuate what is, in my opinion, a very attractive and inexpensive hard-bill.

I fancy that one or other of these birds is beginning to "tune up," as I have on several occasions heard a song which was vaguely reminiscent of the old male's love song.

Both youngsters are now independent and take very little notice of their father.

I believe this is the first occasion on which this species has been bred in captivity, which fact must be my excuse for inflicting on my fellow-members the description of a breeding episode, which

was no more difficult or praiseworthy than the rearing of a nest of canaries.

* * *

LATER.—Oct. 20th both youngsters and the old male moulted during September, and I am glad to see I now possess a female and two males; the young birds are full coloured and the two males are indistinguishable.

REARING OF HYBRID

HYPHANTORNIS CUCULLATUS × *H. SPILONOTUS*.

By Mrs. RALPH HOLDEN.

Thinking it might be of interest to your readers, my husband has asked me to write a short account of the early days of a young weaver bird which I have just succeeded in rearing by hand; so I plunge at once into my subject by saying that "Squeaks" is quite the most delightful little bird that ever sat upon a flannel-covered hot-water bottle and shrieked for the food with which his unnatural parents refused to supply him.

"Squeaks" is a little hybrid weaver—his father is a very handsome red-necked, red-eyed *Hyphantornis cucullatus*—his mother, a more sober and elegant *Hyphantornis spilonotus*, and Squeaks himself was hatched from a very beautiful long-shaped, sky-blue egg about six weeks ago (July). I strongly incline to the opinion that a little brother or sister of Squeaks entered this vale of woe at about the same time he did, but alas! after a few days he or she mysteriously disappeared, along with at least seven or eight little naked, squeaking relatives, who at one time tenanted the queer woven nests in our weaver colony. One or two small corpses were found on the ground, a few young ones were later discovered dead in various nests; the rest appear to have vanished into thin air.

Perhaps the insect food we supplied to the parents was not exactly what appealed to them (I have been told that in a natural state young African weavers are fed on grasshoppers), perhaps we did not provide enough of it. It is not an easy task to dig up daily a sufficiency of absolutely fresh ants' eggs (the only sort they care about) to supply eight or nine gaping throats.

Whatever the cause may have been, nestful by nestful, the poor babies faded away until, on going into the aviary one morning, I was horrified to hear faint squeaks proceeding from only *two* of the nests and the callous parents (three of them, for the cock was the same in each case) turning deaf ears to the wails of their offspring. Obviously something must be done. I provided myself with a hat-box, placed in it two hot-water bottles, covered these with several layers of flannel and then proceeded gingerly to extract the young weavers from their domiciles. This sounds a comparatively simple performance, but, as one who has tried it, I may say it is nothing of the sort. Inside and across the funnel-shaped entrance to the nest (up which one has to worm a finger and thumb, and mine were barely long enough for the job) the parent birds build a strong barrier of woven grasses to prevent the eggs or young from falling out. One has to surmount this, seize the young bird, haul it over the barrier and guide its small body (which feels like hot jelly!) down the little funnel; no easy task with a tender, naked little creature already exhausted by lack of food, and which one half fears to touch. However, the operation was successfully carried out and Squeaks and a still younger cousin from the next nest, dreadfully feeble and pitiful, were safely deposited on their warm flannel. A couple of fresh, squashed ants' eggs were hastily thrust down their gaping throats. (on the end of a match) they were cosily covered up with more heated flannel and conveyed to my bedroom.

Then began an exceedingly strenuous time for me. The second poor little bird died the next day—it never really recovered—but Squeaks, after his first ant-egg, never looked back. At 4 a.m. his first feeble chirp was heard (or at least heard by me, my alarm clock being set for that unholy hour) and I leapt up to heat his hot-water bottles over the Primus, for he was always dreadfully chilly at that hour and could hardly be persuaded to eat anything until his flannel had become thoroughly warmed and comfortable when he “bucked up” amazingly and yelled for his food-laden match.

I fed him at first every half-hour on very, very tiny quantities of squashed ants' eggs and Egbisco; later I got him on to Cecto and considerably lengthened the intervals—to my soul's comfort. His next step in food stuffs was to boiled seed, and he is now at

large in the aviary leading the ordinary life of a happy young weaver-bird.

I sometimes fancy I catch a reminiscent look in the eyes of his parents as they survey him, but Squeaks treats them both with sublime indifference, as well he may. As I said before, he is quite the dearest little bird that anyone could possess and his affection for me is almost ludicrous. He knows my voice (and I believe my step) and if I approach anywhere near the aviary he clings to the wire shrieking a welcome.

His voice, by the way, is not the least amusing thing about Squeaks at present. It is just losing its infantile quality and taking on that peculiar, rasping note, characteristic of the weavers. He retires by himself into a quiet spot and solemnly tries what he can do vocally. The result is weird in the extreme and appears to astonish even himself. It resembles more than anything the noise of a very small, rusty and obstinate key being turned in an equally rusty and obstinate lock.

One of his charming, if somewhat embarrassing tricks, is to perch on my head, and, firmly bracing both feet, tug furiously at a piece of my hair, with which he desires instantly to begin nest-building, for he has the weaving instinct very strongly developed and even before he could eat seed would seize on any little bit of wool or grass and try to weave it into loops. My hair, being fair, strikes him I presume, as a rich find of dried grass ready, so to speak, to his beak.

I hope I have not made this account too long; perhaps, in conclusion, I ought just to describe the personal appearance of my little bird, but on second thoughts will leave it to my husband who is better at that sort of thing than I.

* * *

[The above hybrid resembles the young of *H. cucullatus*. It is, I think, a cock, and should it survive may show some variations on assuming adult plumage. Until this appears I should not like to assert too positively that the hen bird was *H. spilonotus*. I am as positive however as one *can* be in the difficult matter of identifying the hen, and, secondly, the more difficult task of assigning to her a particular nest in a colony perhaps of fifteen others. My six weaver

hens have now hatched for the fourth time this season ; in addition, shamas have twice hatched but not reared.

I am promised, by a friend in Siam, a collection of weavers and bulbuls, some of which would appear to be new to aviculture, but will refer to these upon their safe arrival.—R. A. H.]

THE ZEBRA FINCH.

Tæniopygia castanotis.

By Dr. A. G. BUTLER.

In the Magazine for September 1915, Mr. L. Lovell-Keays observes :—" Zebra-finches die off in aviaries too. If it were not so they would soon be as common as larks and linnets." Of course he means that they soon die off, but I think he should have said "in unsheltered outdoor—or in all-wire ornamental indoor aviaries"; although, as will be seen presently, it was in one of the latter that my last Zebra-finch beat the record for longevity.

I bought my first Zebra-finches I believe about 1890 and bred the first youngster in one of my bird-room aviaries; a year or so afterwards I turned out my stock into flight-cages of about two feet cubic measurement and therein I bred a few more, but not many. Later I liberated three pairs into a covered indoor aviary 16 feet in length, about 6 feet wide, under a rather lofty slanting roof of Hartley's plate-glass. For several years one side of this aviary was open to the air, merely being protected in winter by a screen of canvas running upon rings, but in severe winters the aviary was so cold that, whatever its occupants may have thought about it, I sometimes found it anything but pleasant to enter it; so eventually I had the outer side glazed and introduced a radiator in the outside passage to render it more comfortable.

The transfer of my Zebra-finches to this aviary was so eminently satisfactory in its results, that I never again wished to keep them in cages: they bred all the year round and the youngsters, when only eight weeks old, began to set up housekeeping on their own account; yet although these very precocious infants built, laid eggs and sometimes even hatched an egg or two, I don't think they

ever reared a family in their first year. I must have bred at least a hundred of these little birds without the slightest trouble, the young being sometimes reared upon dry seed alone : I tried them with soft food containing egg and ants' cocoons, but I came to the conclusion that this was a mistake ; as the parents, owing to the stimulating food, flung their young out of the nest and started all over again : finally I gave them crumbled Madeira cake alone, slightly damped, as soft food, and this answered admirably.

From time to time I got rid of pairs of this species to avicultural friends who needed them, but I always had so many that they were the prevalent feature of the aviary and their aggressive behaviour when building rather interfered with the nidification of other and much more interesting small finches associated with them. Therefore when (about 1900) a friend gave me an ornamental all-wire aviary, measuring about five feet by three and perhaps averaging six to seven feet high ; in 1902 I turned into its central and largest division twenty pairs of young Zebra-finches.

I imagined that this toy-aviary, which still stands on the floor at one end of my conservatory, would suit the little birds quite as well as the larger enclosure ; but I discovered that, although they seemed quite willing to breed, the hens gradually died off from egg-binding ; as a general rule such eggs as were deposited were not hatched, and when they were, only one or two youngsters were reared ; and even these proved constitutionally weak and died young.

By degrees the stock dwindled, the hens dying first and then the cocks, until, at the end of three or four years, only three male birds survived, and in course of time these followed suit, the last expiring on the 23rd of October 1912. Before this time all my other pairs had either been dispersed or had died, so that with the veteran in the ornamental aviary my experience of Zebra-finches came to an end.

Now although this species is evidently exceedingly hardy, I came to the conclusion that it is naturally a short-lived bird and I attributed this to the brevity of its period of incubation—eleven days ; indeed I put the average duration of its natural life down as about three years ; and so, for one of mine to have lived for ten years, I regard as unusual.

Undoubtedly the Zebra-finch is pretty and the crouching attitude of the young, with the beak turned upwards, when they are being fed by their parents, is interesting; but a species which increases so rapidly practically almost monopolizes an aviary, so that other and more charming foreign finches cannot receive the undivided attention which they deserve; apart from the fact that they have considerably less choice of breeding receptacles, and even when they have selected a breeding-site stand a chance of being turned out of it by the bolder and more impudent bird or of having their nesting-materials stolen by it, whereas if they attempt reprisals they are furiously attacked and driven away. The number of young Zebra-finches reared in a brood usually averages from four to six, the smaller number being most frequent.

I never succeeded in breeding hybrids with my Zebra-finches, although I tried repeatedly both in cage and aviary; but, as we all know, some very interesting hybrids have been bred; one of the most pleasing being that with the Bicheno-finch, which has been produced more than once: I tried to obtain it for several years in succession but failed utterly. I thought I stood a good chance with a hen Rufous-tailed or Star-finch, but she managed to tear her abdomen against a tiny projecting fragment of the wire-netting of her flight-cage and speedily died in consequence.

THE BREEDING OF THE CHINESE GREENFINCH.

Chloris sinica.

By W. SHORE BAILY.

In the spring of 1914, I bought from Mr. Frostick two cocks and one hen Chinese greenfinches, and when they reached me I was very pleased with their appearance. They are very pretty birds, somewhat resembling our greenfinch, but much smaller. Their black and yellow wing bars and yellow rumps make them look when flying as bright coloured as goldfinches, and I understand that they have been exhibited at some of our shows as hybrids between *Fringilla chloris* and *Fringilla carduelis*.

Their call note, when excited or alarmed, is more like that of the chaffinch than that of any other English bird. I have never heard them attempt to sing.

In the summer of 1914 all three birds were kept together in an outdoor aviary, but no attempt whatever was made at breeding. This spring a pair were turned into the same aviary and the odd cock into an adjacent one with a hen goldfinch. At the end of May I noticed the cock greenfinch chasing the hen, and on June 4th I found that she had torn the top out of a rufous-necked weaver's nest and built herself a cup-shaped structure within. Five greenish-white eggs were laid. These were slightly marked at the larger end, and were, in fact, facsimiles of the eggs of our brown linnet. Things went very well for a few days, when one morning I found the poor cock greenfinch in a woeful state. One leg was damaged and a large patch of skin and feathers was torn off his breast. He looked very much as if he was going to pass in his cheeks, and my hopes of breeding *Chloris sinica* fell to zero. However, the next day he was better and he continued to improve from day to day. In the meantime the hen sat steadily, and I still had hopes of at least seeing young ones, even if she were unable to rear them unassisted, but on going into the aviary on June 8th I found the nest and eggs on the ground. I think that the cock weaver must have been the culprit. There was certainly some excuse for his display of temper on this occasion, as I have no doubt that he had hoped to persuade one of the hen weavers to start house-keeping duties in this nest.

On the 12th of the month I saw the hen finch again building, this time in a laurel. A neat cup-shaped nest was built entirely of grey and white goat-hair; this was lined with a few feathers and two eggs were laid. Incubation commenced on June 15th, and three days later, on examining the eggs, I found that they were fertile. The hen alone did the incubating, and, on looking into the nest the last day of the month, I found that two young were just hatched. They were covered with white down and were queer little objects. As the nest was within a foot of the entrance door and quite low down I had every opportunity of watching their growth, as the hen flew off every time I entered.

On the 7th, feathers began to appear, and, on the 8th, their



NEST AND EGGS OF *Chloris sinica*, THE CHINESE GREENFINCH.



Photos by W. Shore Bailly.

NEST AND EGGS IN WEAVER'S NEST OF THE CHINESE GREENFINCH
(*Chloris sinica*.)

eyes were opened for the first time. Both parents fed them assiduously on a diet of seed, but a little bread and milk was also used the first thing in the morning. Insects I never saw them take and no mealworms were supplied.

On the 13th one of the young ones left the nest, only to return to it again at night, but the next day both birds left it for good. From the first they proved very adept at concealing themselves under the leaves of the laurel and other bushes, and as we had at this time some very heavy thunderstorms, they probably owe their lives to this fact. In colour the little birds were a pearly grey, striated on the back: head and throat were a darker shade, the breast and under parts being unmarked. Bars of black and yellow on the wings and a yellow rump lent a touch of colour which was especially noticeable when they were flying.

On the 21st they were quite strong on the wing, and, on the 22nd, were at the feeding-table with their father.

The greenfinch in the other aviary, although undoubtedly mated to the hen goldfinch has, up to the time of writing, quite failed to persuade his lady love to set up house-keeping. I hope that they will yet do so, as very pretty hybrids might be the result.

July 28th. The young greenfinches were practically independent of their parents, although I still see the cock finch feeding them occasionally. He has again started chasing the hen. I think it is likely that they may make one more nesting attempt this season. I hope that they may do so as they are well worth breeding.

BAR-BREASTED FIRE-FINCHES.

By ALLEN SILVER.

Although not quite so charming a bird as the common African fire-finch, this small waxbill is always worth buying when examples appear in batches of what are termed in the bird trade "Senegal birds."

For several years now I have bought odd specimens that have escaped the vigilance of the sorter and I have found them quite easy to keep, if fed on small so-called "Indian" millet, plus a little "spray" and "white."

In this waxbill the sexes, according to the Museum authorities, are much alike, except that the male is larger, slightly more brilliant and exhibits more pronounced speckling on the breast than the female. I believe I have possessed both sexes, but I did not hear the males sing, because the continual chatter and chirruping in my bird-room would soon have totally eclipsed the performance. The call note, however, resembles that of *L. minor* more than that of any congener, but it is much louder and more frequently employed.

When at rest, *L. rufopicta* perches in a "squatting" position with the head low down and the tail elevated at an abrupt angle, and, although not a wild bird, it is always more timid than a cordon bleu or common firefinch. Its movements resemble those of a grey waxbill but they are less elegantly executed.

Quite large mealworms were eaten by my birds and the hard seeds of a Zulu cereal grass called "Nyuti" were successfully manipulated. Flowering annual grass seed heads were also relished. Every specimen I have bought in good health, however rough, lived a reasonable period; the only two sound birds I lost died from drowning in one case and fracturing a leg badly in the other. I found that separation was necessary to obtain perfect plumage in a cage, but I dare say in a thinly populated aviary plucking might not (I say might not advisedly) occur. There is no reason why the species should not be bred easily, because it gives no more trouble to its owner than a lavender finch, firefinch or cordon. When these birds come to hand unsound one cannot expect to put them right easily, but a deal of the trouble which arises with birds that are received sound is largely due to the fact that no pains are taken with *new* arrivals. One must not expect birds to do well if "bundled" among a crowd of lusty associates just after a journey, late in the day or during inclement weather.

Gardeners take care to separate and harden off plants and manipulate them in a variety of ways to ensure success, and a somewhat similar treatment should be carried out with birds. This, however, does not bear directly upon bar-breasted firefinches, about which I have little more to say except that they are mouse brown little birds with wine-coloured breasts, eyebrows, and upper tail coverts, and are speckled with white across the chest. Their bills

rather favour in type those of the Melba finch than those of the common firefinch, but the upper mandible is darker in colour. Their eyelids and eyes are not the same colour as those of the common African firefinch.

Coming from Senegambia and ranging from there to the Niger and White Nile (Upper), I should not advise "refrigerator treatment," although they stand an unheated room without shivering in winter. Butler, quoting Ussher, says: "They are one of the commonest birds on the West Coast of Africa, being extremely tame and frequenting the vicinity of houses." There is no need for me to waste valuable space by employing an elaborate description of the species, because skins can be seen at South Kensington, and possessors of a fairly modern library of bird books are sure to find it fully described.

SOME NOTES ON THE TRANSPORT OF BIRDS.

By ALBERT PAM.

Few members of our Society may have the opportunity and good luck to bring back to this country a large collection of foreign birds, but a few hints on the subject may be of interest and possibly of use.

The three most important items to consider in this connection are: (1) Cages; (2) Feeding; and (3) Cleaning. I shall deal with these in the order named.

(1) CAGES.

These should be made of wood, strong enough to stand some rough handling by being passed by crane over the ship's side from the wharf and *vice versa*. They should have battens at the top and bottom so that, if necessary, one cage can be stacked on the top of another, and so that a cage does not rest directly on the deck or floor. Large cages should be provided with handles on their sides to facilitate handling, and all should be provided with a canvas screen fixed to the top; this screen is necessary in very windy weather and should be lowered at night, so that the birds are not disturbed by burning lights or passing passengers or crew.

Perches should be provided for all birds, except vultures, waders, waterfowl, and such birds as partridges, tinamous, etc., which live on the ground. These perches should not be fixed to the cages but should be let into sockets at the sides, so that they can be easily taken out and cleaned: they should of course vary in thickness according to the size of the birds. For larger birds one perch should be placed near the bottom of the cage, just high enough to prevent the birds' tails from touching the floor of cage, while for smaller birds two or more perches should be arranged, care being taken that they are not above one another. For very small birds, like sun and humming birds, it is best to use natural branches or twigs, leaving ample flight room for these as well as for finches, tanagers, and such birds. It is therefore necessary that these cages should be fairly high, and a square shape is very useful. For all larger birds the cages must be made low, only sufficient head room being provided to allow the birds to stretch themselves comfortably on their perches (when provided), as they are otherwise apt to fly up when disturbed and injure their heads; this applies particularly to pigeons, doves, partridges, and birds of similar habits. When a cage is fitted with perches it is best to provide a false bottom made of wood, with a handle, so that it can be withdrawn easily and put back; the opening for this false bottom should always be in front of the cage. If there are no perches an opening should be left along the front, say one or two inches from the floor, for cleaning and washing down, and it should be made possible to close this opening, to prevent draughts, by means of a strip of wood hinged from above.

For small birds the front of the cage should consist of very small mesh thick gauge galvanised wire netting (I prefer the square pattern to the round) and similar netting should be stretched about two inches over the false bottom, as this tends to keep the birds' feet and plumage much cleaner, the droppings falling through the wire on to the false bottom and the food is thus not so liable to be sullied. For large birds a cage front made of wooden slats or laths about one or two inches apart, according to the size of the birds, is usually best and cheapest, but care must be taken with storks and others which are apt to peck and thrust with their beaks,

as passengers and crew who go near the cages to look at the birds are likely to be severely hurt unless ample protection is provided.

For small birds a wooden door should be made at the back of the cage level with the wire flooring, and it should be large enough to admit the hand and arm and also the food and water dishes. It is best for the door to be let into slots so that it falls back by itself and cannot be left open by mistake; some arrangement should be made whereby all doors can be fixed and cannot fall open when the cages are being moved about. For all larger birds it is best for the door to be in front of the cage by arranging for part of the slats to be fixed together and be movable upwards, care being taken that this door runs easily and smoothly, as sometimes it may be necessary to close it quickly and without exertion. I think all swing doors are dangerous, as many birds escape owing to the impossibility of closing them quickly, and if they have a spring this interferes with one's freedom of action inside the cage.

(2) FOOD AND WATER.

Dishes should be provided for both food and water; fairly heavy shallow earthenware ones can be bought anywhere and will be found useful for this purpose, but, as has been mentioned, care must be taken that the doors are wide enough to enable them to be placed where required without tipping them up. They must not be placed under perches and must be cleaned out once a day at least, especially the water dishes, as birds bathe in them and the water is soon splashed about and dirtied.

Seed-eating and fruit-eating birds should not be placed in the same cage, so that generally one food dish is sufficient, but for fruitarians it is useful to attach pieces of banana, &c. to the front of the cages by means of wire hooks. I have found it best to cut up all fruit into fairly small pieces, as some birds like tanagers and others very quickly eat off the exposed part of the fruit and are apt to get a fatal inflammation of the eyes owing to the acidity of the fruit juices if they insert their heads into the deeply hollowed out part of say half an orange. Otherwise the feeding should be looked after in the same way as in a bird-room, only, if possible, with greater care. Fruit, bread, milk, raw meat, fish, rice, and vegetables can always be obtained on board ship in any quantity, but all bird seed,

maize, and other cereals must be brought on board or purchased at ports in sufficient quantities, allowing always for much greater waste than would be reckoned with in a bird-room. For ducks, water-fowl, and all larger birds, the food and water dishes should be of tin and fixed to the front of the cages by means of a handle through the slats, as otherwise, in a rough sea, the dishes are apt to get upset or may be thrown about the cages and injure the occupants. Old petroleum tins are very useful for this purpose and can be obtained practically all over the world; they can be cut to any size, are water-tight and very easy to clean.

(3) CLEANING.

This must be undertaken regularly and thoroughly, at least once a day. On board ship, for some curious reason, the butcher is the official who is in charge of all pets and animals, and it is wise, at the beginning of the voyage, to discuss with him the feeding and cleaning, in order to find out at what time it is convenient for him to help daily with these operations. This is essential, as he can easily obtain the food required from the ship's stores, and also pails, sponges, fresh water, &c., in fact, anything that may be wanted. I always make it a point to meet the butcher at the time fixed and work with him; generally he will be found to be an intelligent man, fond of animals, and to be trusted to do what he is told, in case it should not be possible to be present oneself every day. I usually prepare a list before going on board, with the number of the cage as stencilled on the side, the number of birds in each, and the food required for every cage; a copy of this list I hand to the butcher on the first day and this enables him to requisition for the necessary food every day.

Apart from the feeding hour, I always visit my birds at least twice a day to see whether they require fresh water or more food, the last time just before sunset, when I let down the canvas screens; these are raised at dawn next morning by arrangement with a steward or a member of the crew, unless it is too windy, when they are left down until the weather improves, or some re-arrangement of the cages is possible to screen them or place them in a more sheltered place.

The floor boards of the cages should be washed down when-

ever necessary with fresh water, after which they can be slightly tipped forward to allow the water to escape through the opening at the bottom which I have mentioned above. All false bottoms should be scraped daily with a blunt knife or other instrument, and all stale food removed at the same time. If this is done thoroughly it will be found more sanitary than using a floor covering. I have always found hay most objectionable for this purpose, although it is invariably recommended by butchers, who think that cleaning is simplified by its use. Sand is difficult to obtain at sea, and saw-dust, of which there is usually a large stock on board, is useful in some cases, but should to my mind never be used except for seed and grain eaters.

GENERAL.—It is always wise, when it is intended to bring many and large cases of birds on board, to advise the steam-ship agent at the port of departure of one's intention to do so, so that arrangements can be made beforehand to receive and house the cages. It is also to be recommended to make friends on board with the chief officer and boatswain, who can make matters much more comfortable for the passenger and his birds if they are favourably disposed, in the way of rigging up screens, washing down decks, and moving the cages to more suitable places if a change is necessary. The chief steward is also a useful man to know, as he can supply delicacies otherwise unobtainable. With a little tact and care a voyage with a large collection of birds should thus be made quite easy and comfortable, and looking after the birds gives one an occupation on board which is very pleasant, as it breaks the monotony of a long sea voyage.

ENGLISH NAMES FOR THE PARROTS.

By Dr. E. HOPKINSON.

(Continued from page 354. Vol. VI)

“WELLAT,” native name of the KING PARROT.

WEST AFRICAN LOVEBIRD, the RED-FACED LOVEBIRD.

WEST INDIAN GREEN PARROT, *see under* AMAZON, BLUE-FRONTED.

WESTERMANN'S ECLECTUS.

WESTERN BLACK COCKATOO, *see under* COCKATOO.

WESTERN BLOSSOM-HEADED PAROQUET.

WESTERN GROUND-PARRAKEET, the NIGHT-PARRAKEET.

WESTERN LONG-BILLED COCKATOO, the next.

WESTERN SLENDER-BILLED COCKATOO, *see* SLENDER-BILLED C.

WHITE COCKATOO, the GREATER SULPHUR-CRESTED COCKATOO.

WHITE COCKATOO, GREAT, *see under* COCKATOO, GREATER WHITE-CRESTED, and *under* SULPHUR-CRESTED.

WHITE COCKATOO, LONG-BILLED, *see* SLENDER-BILLED C.

WHITE COCKATOO, RED-FACED, the BLOOD-STAINED C.

WHITE COCKATOO, SMALL, *see under* SULPHUR-CRESTED C., LESSER.

WHITE-BELLIED CAIQUE.

WHITE-BILLED PARROT, MULLER'S ECLECTUS, *see under* ECLECTUS.

WHITE-BREASTED PARROT, an early name for the BLACK-HEADED CAIQUE, *see under* CAIQUE.

WHITE-BROWED AMAZON.

WHITE-CRESTED COCKATOO, same as GREATER WHITE-CRESTED C. (q.v.).

WHITE-CROWNED PARROT, the WHITE-BROWED AMAZON, *see under* A.

WHITE-EARED CONURE.=*Pyrrhura leucotis*. Native names, "TIRIBA" and "FURAMATO."

WHITE-FRONTED AMAZON.

WHITE-FRONTED PARROT, *see under* AMAZON, WHITE-FRONTED.

WHITE-FRONTED PARROT, VAR. B. (Latham).=SALLE'S AMAZON.

WHITE-HEADED AMAZON, *see under* AMAZON, WHITE-FRONTED.

WHITE-HEADED LOVEBIRD, *see under* LOVEBIRD, MADAGASCAR.

WHITE-HEADED PARROT.=*Pionus senilis*. (2) An early name for the WHITE-FRONTED AMAZON, *see under* AMAZON.

WHITE-HEADED PARROT, VAR. A., *see under* AMAZON, RED-THROATED.

WHITE-TAILED BLACK COCKATOO, *see* BAUDIN'S COCKATOO.

WHITE-TAILED COCKATOO.

WHITE-WINGED PARRAKEET.=*Brotoperys virescens*, sometimes called the YELLOW-WINGED PARRAKEET, and YELLOW-AND-WHITE-WINGED PARRAKEET.

*WIDOW PARRAKEET, *see* QUAKER PARRAKEET.

*WILSON'S PARRAKEET, Latham's name for the PHILIP ISLAND PARROT, *see under* KAKA (2).

"WOOK-UN-GA," Australian aboriginal name for the BLACK-TAILED PARRAKEET, the "ROCK PEPLAR."

"WYLA," native name for the BLACK COCKATOO.

"XAXABE," same as "SASSABE."

YELLOW AND WHITE-WINGED PARRAKEET, the WHITE-WINGED PARRAKEET.

YELLOW BUDGERIGAR, a cage-bred variety.

To be continued).

OBITUARY.

CAPT. THE HONBLE. GERALD LEGGE.

We deeply regret the death of Capt. the Hon. Gerald Legge who fell, on the 9th of September, in action at Suvla Bay. He was one of the very best of field naturalists, a specialist on wildfowl, and had a complete knowledge of ducks.

A correspondent in "The Field" writes:—"In disposition Gerald Legge was one of those simple and modest natures that appeal to men. The immensity of nature in his eyes was something to be revered. The rising sun, the beauty of a bird's wing or a lovely flower were things before which he stood hat in hand. . . . Such a man was at once ready to defend his country. He was last seen lying mortally wounded on the ground, and cheering on the men of whom he was so proud. That was Gerald Legge."

CORRESPONDENCE, NOTES, ETC.

A LONG-LIVED TANAGER.

Dr. BUTLER writes:—My second scarlet tanager (the last of my tanagers) died on the 4th of October; it was getting very old and its appetite was not so good as formerly, but it would have still been alive no doubt, only my man, after cleaning out its cage yesterday omitted to give it back its food, and for a delicate bird to be starved for twelve hours is decidedly risky. I have had this bird for 18½ years, which (I think) is a record.

HUMMING BIRDS IN CAPTIVITY,

Aviculturists will always be grateful to Mr. Albert and Mr. Hugo Pam who were the first to attempt in latter years the keeping of humming birds, and to Mr. A. Ezra who was the first aviculturist in Europe to be really successful; followed by our French member in Paris. What Mr. Ezra doesn't know, is not worth knowing about these birds; and with the first two humming birds that he had, he brought them round from a dying condition into perfect vigour, health, and plumage.

THE SWALLOW FRUIT-EATER (*Procnias viridis*).

SIR,—I was much interested in the notes of Ecuador birds last month, and noticed that among them there are examples of *Procnias tersa* or *viridis*.

This is not the first time we have received the bird, because several came a few years back.

Mr. Maxwell had one which I identified for him on arrival, and I had it

under observation until it died. It was a hen. The cock is a beautiful verdigris blue bird with black throat, and I believe has one or two black bars on the flanks. A male I have not seen alive, but I have frequently seen skins of this bird in S. American cases of *stuffed* birds. Although it feeds like a tanager it sits more bolt upright and resembles some of the S. American chattering, our waxwing and the manakins (*Pipra*), and of course has a frog-like rectal arrangement. It is certainly as much at one end as *Tanagridæ*, as *Saltators* are at the other, the latter resembling cardinals more than anything else. *Euphonia* as a group verges in the direction of this bird (*Procnias*), in as far as outside appearances go.

The specimen I had under observation was a hen, although we waited a year to see if it was in immature plumage. It was an enormous eater and a distinctly uninteresting bird.

ALLEN SILVER.

PREVIOUS BREEDING OF BEARDED TITS.

Dr. Lovell-Keays is after all not the first to breed the Bearded tit. Mr. Richardson Carr has done so successfully for several years with three or four pairs, and there has been apparently no difficulty about it. The aviary in which these birds are kept is a large one with a pond; reeds, etc., on the Tring Park estate.

TO THE MEMBERS.

The kind words that appeared in the October Magazine from the executive council of the Society are very encouraging. Whatever harmful effects the great and terrible war may have upon us in the future, we can at any rate congratulate ourselves upon our coming of age, expressing the hope, as in the case of others who do likewise, that we may be spared to live long and prosperously.

Then, too, those whose coming of age is celebrated, are accustomed to receive gifts, and one wonders whether in spite of further taxation, some of our members will think fit to make any offerings towards the heavy expenses of the illustration fund! That they will do all they can towards keeping up the magazine by *writing* for it, I feel confident; and if, as editor, I may be allowed to personally thank those who have contributed in this way, I do so most gratefully. Gentlemen of the medical profession who are always busy, but who have had their work doubled of late, have set an example of what can be done, and I feel sure the Society is especially grateful to Dr. Amsler and Dr. Lovell-Keays. But it may be invidious to mention especial names, although I do it, for there are other members, such as Lord Tavistock, with his long and interesting papers, whom one knows have been unceasingly working in connection with the war.

Dr. E. Hopkinson we also cordially thank for his invaluable list of the English names of the Parrots, a list which for some months has not only provided us with a fund of lasting information, but has also saved me from many a qualm and a sigh as to whether I should have sufficient 'copy'! but the Society thanks *all* those who help with their pens and purses.

HUBERT D. ASTLEY, *Editor*.



TOWHEE

(Upper figure, female; lower figure, male)

Order—PASSERES

Family—FRINGILLIDÆ

Genus—PIPILO

Species—ERYTHROPHthalmus

National Association of Audubon Societies

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THE TOWHEE.

By T. GILBERT PEARSON.

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Not all birds possess strong personalities. Just as among persons there are many who are neither particularly good nor bad, handsome nor homely, brilliant nor stupid. They play an important part in life, to be sure, but they do not attract any great attention nor arouse, on the part of the observer, any special interest or enthusiasm. We all know such people, and I dare say most of us have made the acquaintance of such birds now and then.

A STRONG CHARACTER.

The above statement, however, does not serve to describe the towhee, except in a negative manner, by calling attention to the fact that it does not belong to the mediocre class, for it is a bird of distinct personality, being endowed, in a very large way, with what we may call "character." The male is especially striking in appearance, and both he and his mate are filled at all times with an energy and bounding activity that challenge the attention and admiration of everyone who is so fortunate as to meet them.

One cannot watch the towhee long without imbibing some of the purposeful energy which the bird imparts in its every movement. The ambitious and slothful alike may receive inspiration and wisdom by considering its ways. I am particularly fond of the towhee, and have long counted his friendship among my most cherished possessions.

It is about the tenth of April when this bird is usually first

seen in the latitude of New York. In rare instances it has been recorded in the winter as far north as Massachusetts, but such cases are very exceptional. Virginia is usually the extreme northern limit of its winter sojourn.

A WORLDLY-WISE BIRD.

As a rule it is not quite so trustful of mankind as are some of our better-known lawn and garden species, as, for example, the robin and house wren; nor is it one of those shy denizens of forests and open fields that rarely venture into a city. In fact it occupies a somewhat middle ground, and to a more or less extent flits between these two groups, and seems fairly well at home in either situation, as might be expected of so well-bred a bird-of-the world.

Its occurrence in town, however, would appear to be more common in the autumn than the spring. It seems to prefer to investigate the abodes of man during the period when it has no pressing domestic duties and responsibilities. When nesting-time arrives, therefore, it is best to seek for it along hedge-rows or beside old fences half concealed by shrubbery, from the depths of which often it will announce its presence by its sharp, clear cry *chewink*. Abandoned fields, wherein briars and bushes have sprung up, are also favourite places for the towhee.

ITS SONG.

One summer day, as a member of a Harvard botany class, I journeyed some miles out of Cambridge, and afoot began a rather laborious climb up the somewhat steeply sloping side of Blue Hill. As we advanced, the trees decreased steadily in size until, perhaps three-fourths of the way to the top, they became so scraggy that in many places they had much the aspect of bushes. This change in the condition of the vegetation must have been due largely to the poor quality of the soil, as the altitude was not great. We studied many plants that day, many of which I have forgotten, but I do remember with great distinctness the songs of towhees, which with marvellous clearness rang from the topmost bough of many a stunted tree. This is the kind of situation it invariably occupies when singing. The nightingale may sing from the depths of its myrtle-bush, the veery from the bough of its favourite oak, and the gnat-

catcher from its nest, but, like the winter wren and the nonpareil, the towhee must occupy the highest twig of its chosen sapling or bush before it flings to the summer winds the melody of its notes. Its song is not a remarkable performance when compared with the singing of many birds, but it is vigorous and appealing. The song of the towhee is the passionate cry of a love-sick bird, who will not take "no" for an answer. Ernest Thompson Seton has told us what it says. He asserts the bird plainly shouts, *chuck-burr, pill-a-will-a-will-a*.

THE NEST.

The towhee's nest is often situated on the ground, though sometimes we may find it in shrubs or low bushes. Even when built in a bush it is always near the earth. In fact I have never found one at more than a foot elevation. It is usually made of a collection of dead leaves, strips of grape-vine or other bark, and occasionally a few twigs. The lining appears always to be made of fine, dead grasses. It is not covered over like the nest of the bob-white, meadowlark, oven-bird, and some other ground-nesting species, and is protected from the rays of the sun and the eyes of the curious only by the twigs and leaves of the bush in which it is hidden. Although fairly ample in size, it is in reality rather a frailly built cradle, and usually goes to pieces during the rains of autumn or the winter storms.

As may be noticed from the accompanying coloured illustration, the female is less highly coloured than her mate. This is the case with a great many kinds of birds, and it would appear that when kind Nature made them she had in mind the fact that the mother-bird would do most of the brooding; and that while on the nest her somewhat duller coat would not be so noticeable to enemies, which, with claw and beak and tooth, are ever afield on the hunt for little birds. She seems to know how well her colouring protects her, and sometimes one may approach to a point where the hand may almost be laid on her before she takes wing. Four or five white eggs, finely and evenly spotted with dark red, are laid, usually in May. When one approaches the nest, especially after the eggs have hatched, the parents will immediately appear, and, flitting about on the ground or from bush to bush, will anxiously voice their alarm.

This will be kept up without intermission until the intruder has departed.

THE PARASITE.

The towhee has one unfortunate weakness—it allows itself to be imposed upon by the cowbird. The happiness and prosperity of many a towhee home is ruined by this dark destroyer of wild-bird domestic life. The cowbird, which makes no nest of its own, often lays one or more of its eggs in the towhee's nest, where they are allowed to remain. The young cowbird grows rapidly, and often crowds some of the young towhees from the nest. Later, when the young leave the nest together, we may sometimes see a mother-towhee engaged in the care of a young cowbird-impostor while giving attention to her own young.

ITS FOOD.

Some birds in the world seem to feed entirely on fish. In winter, spring, or summer, it matters not, they must have fish. Should the ice form over their usual fishing-places they fly away to where the water is open and fish may be obtained. There are other birds who eat only insects. Often they are not choice in the kind of insects they have, but almost any kind that has wings and can fly these air-feeding birds seize and devour. Our towhee, however, is nearly omnivorous. Edward Forbush, who has spent a great deal of time finding out just what birds eat, tells us that towhees are fond of ants and of a great variety of beetles. They also eat hairy caterpillars in great numbers. Those found in the neighbourhood of gardens, or of fields under cultivation, frequently flit along the ground among the vegetables or grain in search of cabbage-worms, potato-bugs, and such other small creatures, many of which are destructive to crops.

It will thus be seen that the towhee is a very useful bird to mankind, and should receive the most careful protection by everyone. In fact, in most states where this bird is found, it is protected by law, and anyone found killing a towhee is liable to fine or imprisonment, and it is right that this should be so. They eat also such things as grasshoppers, cockroaches and flies, and perfectly adore the long juicy bodies of earthworms. Down South, where they go to pass the winter months, they have another habit of

eating which would appear to be a very unusual one for so ground-loving a bird. Here, when early spring comes, they mount into the higher branches of trees, where they feed on the swelling buds. In the mountains of North Carolina some persons declare that towhees ("Jorees" or "Joreekers," they call them) go into the fields in every spring and pull up the planted corn, just about the time it is sprouting and beginning to show above the ground. The bill of the bird is strong enough to crack a grain of corn, and it is probable that the habit has been developed locally, as there would appear to be no very widespread custom of this character. As a usual thing, however, we find the towhee on the ground in a thicket, where we may hear him scratching among the fallen leaves and throwing them about with an energy and vigour surprising in a bird which measures only about eight and a half inches in length.

WHAT AUDUBON SAID.

John James Audubon, the great naturalist and artist, who was such a close observer of birds, in writing of the towhee, said: "The young leave the nest long before they are able to fly, and follow the mother about on the ground for several days. Some of the nests of this species are so well concealed that in order to discover them one requires to stand quite still on the first appearance of the mother. I have myself several times had to regret not taking this precaution. The favourite haunts of the towhee buntings are dry barren tracts, but not, as others have said, low and swampy grounds, at least during the season of incubation. In the Barrens of Kentucky they are found in the greatest abundance.

"Their migrations are performed by day, from bush to bush, and they seem to be much at a loss when the great extent of forest is to be traversed by them. They perform these journeys almost singly. The females set out before the males in autumn, and the males before the females in spring, the latter not appearing in the Middle Districts until the end of April, a fortnight after the males have arrived. Many of them pass the confines of the United States in their migrations southward and northward.

"Although these birds are abundant in all parts of the Union, they never associate in flocks, but mingle during the winter with several species of sparrow. They generally rest on the ground at

night, when many are caught by weasels and other small quadrupeds."

Besides the common towhee there are about fourteen other kinds of towhees in North America, as, for example, the Oregon towhee, Cañon towhee, and Green-tailed towhee. The one which most closely resembles that of the Eastern States is the White-eyed towhee, found in summer from the coastal country of North Carolina southward through Florida.

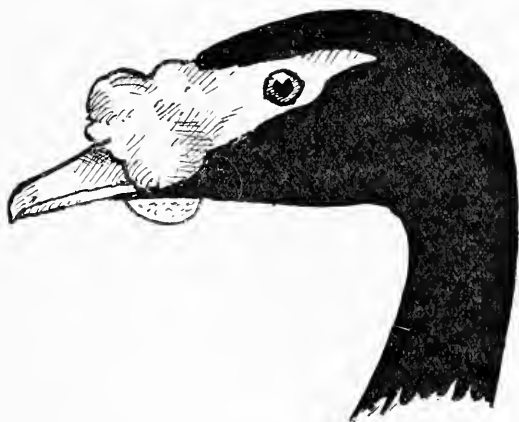
GRASS UNDER SWANS' TONGUES.

By ALBERT PAM.

For some time past I had noticed that two of my black-necked swans were developing a curious pouch-like swelling under their lower mandible. This "pouch" increased in size gradually until it looked like a semi-circular distended sack of pink and veined skin, having a depth of about one inch. I could not make it out: it seemed quite natural and almost normal in appearance and did not seem to affect the birds in any way; yet my third black-necked had no such "pouch" nor had any of my Coscoroba swans or other waterfowl. I looked in vain for any similar swelling in the black-necked swans at the Zoo, and eventually discussed the matter with Mr. Seth-Smith. I must confess that I thought I had imported some variety of these swans having a natural "pouch" below the beak.

Last week Mr. Seth-Smith came to look at my waterfowl and I showed him the two swans, which are quite tame and regularly walk up to the house for some special food. He examined them with much interest and was as much at a loss to account for the "pouch" as I, but said that he had never seen or heard of any variety of the typical black-necked swan. We at last agreed that the only thing to do was to catch one of the birds and examine the swelling; this was quite easy to do and in a few minutes we had caught one and opened its beak. To our surprise, we found under the tongue a hard black mass, which with some difficulty we extracted and washed out the then empty "pouch" with boracic, as it was slightly sore. We then treated the other bird the same way.

The mass we extracted weighed slightly less than half-an-ounce and was nearly $1\frac{1}{2}$ inches long by 1 inch deep in each case. Mr. Seth-Smith very kindly took the two lumps home and examined them carefully by dissolving them; he writes me that they consisted of a fibrous grass or aquatic plant (the fibres being very fine indeed, almost like fine cotton thread), matted into the two masses. He adds that it is a wonder that they had not closed the windpipe by pressing the tongue upwards; anyhow it was very fortunate for me that he was able to help me find out the cause of the "pouch" in time, as otherwise I would certainly have lost both birds before long.



These swans are of course great grazers, but they eat grass with all my other birds, and as I have said, none of these were affected, although a fourth black-necked which died recently of another complaint also had a similar "pouch" developing, which may have contributed to his death. I shall now watch my swans most carefully and on the first appearance of a "pouch" shall clean it out immediately. I don't think that I can prevent its formation as I cannot stop the birds from grazing and I don't know where they pick up this particularly fibrous grass.

In the accompanying sketch the position of the "pouch" and its relative size is indicated.

PENNANTS' PARRAKEETS AT LIBERTY.

By the MARQUIS OF TAVISTOCK.

The sturdy, handsome broadtail, which has received the rather unsuitable scientific title of *Platycercus elegans*—a name far more appropriate to the trim little Stanley—is, of all the true *Platycerci*, the most vexatious to keep at liberty. Other parrakeets, it is true, stray as badly, but the Pennant seems to take a peculiarly fiendish pleasure in raising your hopes to the highest possible pitch before he elects to desert you. Still, with perseverance, some measure of success may be attained, the great secret with Pennants, as with rosellas, being to start with cocks which have been many years in captivity and have passed through the taming ordeal of the show bench.

My first Pennants were a lot of three young birds in patchy red and green plumage and were said to be acclimatized. I lost two almost at once from chills, probably through keeping them in an aviary with a glass roof; a glass roof is an abomination, causing the temperature to vary to an extraordinary degree. The survivor was released full-winged (it was winter at the time) and strayed almost at once. It was caught and returned to me, stayed a fortnight, went away again and three months later was picked up dead in a wood a few miles off. That it should have lived so long was rather remarkable, for Pennants can seldom do without artificial food when first released, although they ultimately become quite independent even during the cold months of the year.

I next bought a pair of adult birds in fine condition. I let the cock out full-winged, but neglected to put his mate in a place where he could easily see her, consequently I lost him the first day. Then I got four pairs of newly-imported adults and turned them into an enclosure with cut wings. Half of them left as soon as they could fly, leaving two cocks and two hens behind. One of the latter nearly drowned herself in a pond and we put her in a cage to recover; being apparently bent on suicide she got her head through the bars and "hanged herself by the neck until she was dead." The odd cock mated with a Port Adelaide parrakeet, but disappeared in the spring. The pair stayed through the winter and in March began

to look for a nesting-site. After examining several trees and finding them not to their taste, the cock became convinced that a rain-pipe satisfied all the requirements of a nursery and spent several days "puffing" his useless find with all the energy of a promoter of a bogus mining company. Finally, I suppose his wife told him not to be such an ass; anyhow he left the rain-pipe and cleared out of the neighbourhood altogether and I never saw him again. The hen was caught some miles away, but she did not stay long when again given her freedom.

I had the same bad luck with yet another lot. Most of them stayed through the winter, one even returning after a three months' absence, but in April two died of chills—goodness knows why—and the rest completely vanished.

Then, at last, I got a steady old cock, of the type I have mentioned as being the most promising for acclimatization purposes, and having provided him with a mate I turned him out with a cut wing in the usual way. The pair stayed well after they had moulted, but in the autumn the hen was appropriated by a yellow-rumped parakeet, for the male pennant, though a very fine bird, was an extremely poor fighter. He had two principal call-notes, one of three syllables and one of four, which so took the fancy of a Port Adelaide who was also flying at liberty, that he soon learned to imitate them so accurately that it was impossible to tell by the sound which bird was whistling. The plagiarist Adelaide was not however in the least grateful to his instructor in music and treated him with scant courtesy when they happened to meet.

As the yellow-rump—a most savage and aggressive bird—showed every intention of retaining his ill-gotten bride, I made enquiries for another hen pennant. A cock was sent by mistake and I would have returned him if I had not been attracted by his peculiarly beautiful soft whistle, which was quite unlike any of the ordinary calls of his species. He was also very steady and had a curious line of blue feathers running down the centre of his breast, so altogether he seemed worth keeping and keep him I did, which, as it turned out in the end, was really lucky. When I let him out he joined the first cock, and for a time the two were very good friends.

At length I succeeded in obtaining a genuine hen; quite a

nice bird, except that she was tailless. I released her in the presence of the old cock who took to her at once, but a few days later he was ousted by his blue-breasted companion and again was left a bachelor. Poor fellow! he was really very unlucky and I always believe he would have stayed and nested if he had had a fair chance. But try as I might I could not get him another mate, and one April morning I was only just in time to rescue him from the yellow-rump and his first faithless wife, who were pitching into him in murderous fashion and would certainly have killed him if I had not driven them away in time. For some days previous he had been getting more and more restless, calling incessantly, and I suppose he had ended by throwing caution to the winds and, after telling the yellow-rump exactly what he thought of him, had fought until too exhausted to fly. His defeat proved too much for him and he left very soon afterwards. I regretted his departure but could not in justice blame him for going.

Ill-fortune also attended the yellow-rump—perhaps he deserved it! His mate nested in an old beech-tree, where he was seen feeding her, but after a short time she mysteriously vanished and he left before we realized that anything had gone wrong. Some weeks later I had the branch cut down to see if we could solve the mystery. There was no trace of the pennant at all, but there *was* a clutch of half-incubated rosella eggs, whose unfortunate owner turned up just in time to see her home fall crashing to the ground. Of course we had no idea that the hollow bough had a second tenant or we should never have thought of interfering with it. That the rosellas had evicted the Pennant is most unlikely, for she and the yellow-rump were the master pair in the garden.

Better luck however was in store for the blue-breast and his mate. After inspecting a nest-box in a tree for some days, they removed to a barrel which I had had let in under the roof of a building, and there, only a few yards from the rain-pipe which my first pair had so fruitlessly inspected, a brood of six were safely reared. To my great surprise the young left the nest in adult crimson plumage, a fact for which I can offer no explanation, especially as the nearly-related Port Adelaide parrakeet, always with me, wears its immature green dress for the full period.

After this my luck with Pennants again waned. Two of the young birds died, others wandered and the old pair failed to rear their second brood. During the winter the old hen managed to enter a building where she either starved to death or killed herself by flying against a window and the cock and a young hen are the only survivors. They have been occupying the same barrel under the roof, and if they should succeed in rearing their young it will be interesting to see whether they are red or green on leaving the nest.

SOME FIREFINCHES AND OTHER GAMBIAN BIRDS.

By Dr. E. HOPKINSON.

This year I had the opportunity and the luck to catch and get home quite a number of interesting African birds, such as quail finches and two of the rarer firefinches (*L. rufopicta* and *vinacea*). These have revived an interest I have always felt, and have provided material for the following notes on them and some other Gambian birds. These with stray recollections and reflections, which crop up as I write, may be of interest to readers of the magazine.

THE SPOTTED OR BAR-BREASTED FIREFINCH.

Lagonosticta rufopicta.

This beautiful little firefinch, so rarely imported, except as an occasional odd one among a consignment of ordinary "senegals" I have always considered nearly as rare in nature in the Gambia, though in other parts of the West Coast it must be common; Shelley describing it as "extremely abundant during the spring" on the Gold Coast, and giving its range as "Senegambia to the Niger and Upper Nile Districts."

In the Gambia, too, longer experience has made me alter my opinion as to its rarity there. It is so very local in its haunts that for years I looked upon it as rare, never having seen more than a dozen individuals, as until recently I had never happened on to one of the sites it affects. Now I realise that in places, few and far between it is true, it is quite common, as this year I have found one locality, where it is quite numerous and almost the only waxbill

met with, while in two others it is found associating in about equal numbers with the common firefinch.

This discovery, which has taken me thirteen years to make and which came too late to allow much catching this season, enabled me nevertheless to bring home ten examples. Another year, if circumstances permit my visiting and spending sufficient time at one of these places, I feel sure I could get as many as I wanted.

The places where one finds these birds are also close to fresh water, but, in addition to this, there must be some other attraction, although one cannot exactly say what that may be, unless indeed it be the absence of long grass, so beloved of most of our little birds, both seed and insect eaters, but which apparently is disliked by these firefinches. The common firefinch one may meet with almost anywhere, near water or away from it, in the villages, on the farms, or in the "bush," but *rufopicta* is only to be found in those very few localities which completely fulfil its requirements, whatever these may be.

I now know the general look of such a place so well, that I can usually spot one at once on the march, and have my surmise justified after a short halt to watch, by the appearance in the open of some of these birds. Such a spot has a gentle slope towards the river or to a line of shallow swamp-pools; the vegetation consists of low thorns and other small bushes, particularly a small leaved evergreen, commonly known as the 'Mandingo tea-bush,' while the ground itself is free from the usual long tropical grass, but sparsely covered with a sort of twitch and other straggling grass-like plants. If, in addition, a bare and rocky ironstone ridge overhangs such a place on at least one side, one may feel sure that one has found a haunt of these firefinches. It was in a place which fulfils all these requirements, that I found them practically the only waxbill present. It is quite a small area, as less than a hundred yards away on either side, without any very obvious change in the general character of the surroundings, except perhaps that the grass becomes rather coarser and taller, not a single *rufopicta* will be seen, though common firefinches, cordons and other waxbills abound.

Some years ago, in "Bird Notes," in an attempt at a translation of Dr. Russ on the firefinches, I gave his very full description

of the plumage of this bird, modified by a few necessary corrections and additions, which I was able to make from the British Museum Catalogue description or from observation of some specimens I had at the time. This, on the whole, was I believe fairly accurate, but as such lengthy descriptions of plumage usually mean very little or nothing to most people, to myself particularly, as it is so difficult to visualise exactly what the words mean, that I will not attempt anything of the sort here, but be content with a short general description, referring any seeker after fuller details to Shelley's description on page 262 of Volume IV. of the "Birds of Africa," or to the more accessible "Foreign Birds for Cage and Aviary," (A. G. Butler), part I., page 152, where Shelley's account is quoted.

Slightly larger than the common firefinch, the spotted in place of the complete scarlet-red colour of the male of its relative, has brown upper and pinky-crimson under parts with very distinct white spots or short bars on the sides of the breast; the eye-ring is narrower than that of *L. senegala* and grey not yellow. At first glance the difference between the sexes is not marked, the adult female (as described by Shelley) only differing from the male "in having no trace of red on the wings and a less amount of white markings on the breast." I think, too, one can say that the crimson is slightly less bright. This red-on-the-wing difference seems a really good diagnostic point, though it might not differentiate between a young male and the adult female. I believe I can pick out a true pair from several seen together, but should not like to attempt to sex any single individual, except by this wing-mark, which though slight, is quite a distinct one, and then only with a reservation as to young males. This point can only be made out by handling the bird; then, when the wing is spread out, one sees in the male that the edges of the upper wing-coverts (*i.e.*, just within the angle of the wing on the upper surface) are faintly washed with dull crimson, while, on the other hand, in the female not a trace of red is visible on the general brown colour here.

I know of no good coloured plate of this bird. In Reichenbach's "Singvogel," there is a coloured figure (pl. 14, fig. 38), but this does not in the least resemble the bird it purports to portray, or indeed any bird at all, except perhaps the christmas cake robin, var.

papier-maché. This is one of the very few exceptions in this most useful book, which contains 50 coloured plates, giving coloured figures of at least four times as many weavers, whydahs, and wax-bills, most of which, considering the date of publication (186-) and the general character of the book and plates, are accurate and readily recognisable. With this particular bird, however, the author has not been fortunate in his artist, or perhaps it was a case of the latter having to make bricks without straw and do the best he could without a bird or its skin before him. If that was so and he had to rely for his inspiration entirely on the short and anything but accurate description given on page 19 of the letterpress, one need not wonder at its failure, for this description would almost fit a confectioner's robin as well as, or better than, any living bird.

For some reason (perhaps the influence of the last paragraph of Dr. Butler's account of this species, where he gives Mr. Abrahams' unfortunate experience with a consignment of these birds), I have always at the back of my mind kept to the idea that these birds were more delicate than even the common firefinches.* My records however of those I have kept by no means bear out this belief.

The first I ever saw were three I brought home among a large collection (some hundreds) of Gambian seed-eaters in July, 1902. These, the only three obtained, were turned into an outside aviary, where one died in the following September. The other two I kept, outside during the summer months and indoors in a cage in the winter, till 1903. In October of that year I exhibited one at the

* Directly I had written this down I realised that I had got right on to one of the many debatable grounds of present day aviculture, and feel certain that it will call forth some rejoinder that firefinches are not delicate if properly treated. Anyhow, I will warn any corrector, that although I have had to change my opinion regarding the spotted firefinch's delicacy, I shall never be able to believe the same of the common firefinch or that 'hardy' is an epithet that suits them.

The whole question of the hardiness or the reverse of any particular species, and also the possibility or ease of breeding in confinement, depends so much, it seems to me, on the individual, not only of the bird but of its owner, that any generalisation from a pair or two, or from one man's experience (such as I am writing now) is of little value as regards the species as a whole. One pair, out of several, all apparently in the same excellent condition, will survive to old age (or breed, as the case may be), and one aviculturist will succeed where others fail.

Crystal Palace Show, where, in a good class, he won a first, perhaps luckily, as he beat a *Lagonosticta niveoguttata* and two Melba finches *Pytelia afra* and *melba*. In the following November I sold him and the other survivor well, the show bird still in perfect condition, though the other, my notes say, was "bald on the head and rough round the neck, but very lively." In 1906 I brought home six more, bought at different times from various catchers; three of these I gave away at once (one pair to the Zoo., where they lived at least a year), while of the remaining three, two lived in the aviary at Brighton till 1908 and 1909 respectively, and one of these was never brought indoors at all the whole of one winter. This year I have ten, all in practically perfect fettle. I have never had results anything like this with ordinary firefinches and never expect to, at any rate while my accommodation is limited to a small and usually crowded out-door aviary and indoor cages.

Again, I have never lost one of these birds immediately after catching, though this fact does not mean very much as an indication of hardiness or the opposite, for most of the small African seed-eaters appear to be ready-made cage-birds. One can catch a couple of dozen in the morning, put them in a cage and see them settle down at once and be feeding and even bathing within a few hours. One really is quite surprised if one does die. For example, this year I got some 50 to 60 firefinches (common and others), cordons, etc. during April and May; the whole lot survived to reach home—not a death from the trap to arrival, and (more wonderful still) not one up to date, a fortnight after landing, either among those turned into the aviary or those still indoors. I have never been so fortunate before. The casualties which have been *nil* or insignificant in Africa and on the voyage, usually commence as soon as rail and cab transport is necessary and continue after the destination is reached. These little birds can apparently stand any amount of land travelling (head-porterage) in Africa and even the turmoils of the sea-voyage, but English railways and their porters, combined with the change to the delights of an English July, are often more than they can stand and prove too much for a good few.

This year there was just one condition of travel differing from what is usually the case on my journeys home with birds, and

this may have been the reason, or one of the reasons, for the absence of mortality. As a general rule the birds are kept on deck till about the Canary Islands and then put down below when we get into colder weather. This year, however, no live stock was allowed on deck at all, but had to go at once right down into the bowels of the ship to some place in the butcher's domain and in the immediate neighbourhood of the refrigerator. I was horrified at this in Bathurst when I came on board, it seemed so cold and dark, though immediately under an always open hatch, and as the place was only open for a short time at midday, one had to be most rapid and punctual in one's attendance for feeding, and if one missed the proper time, the only means of access was down a long vertical ladder, about as high as a four-storeyed house, the descent of which would have been beyond me at any time, let alone on shipboard. A refrigerator (and its products) is a thing of joy to the white non-African non-feathered biped, but hardly the neighbour one would select for African feathered dittos, but the results seem to have proved its suitability as a temporary home for travelling birds, at any rate mine all arrived in wonderful condition and without loss. Everything else it was true was in their favour. The voyage was the quickest I have ever made, for even an African boat hurries herself when submarines are about, and we landed in bright sun on what was apparently the last warm day of this particular summer, while the temperature of the place where the birds were kept, which seemed so chilly in Africa, remained practically the same, about 70° Fahr. all the way.

How different it would be with most fresh-caught British birds? What rate would be asked to insure the survival of any fifty of these for three months even in their own country, leaving out altogether any travelling risks? Nor does it hold good for all African seed-eaters, for some of these, for instance, quail finches are particularly fragile and need most careful handling and treatment until accustomed to their café and new surroundings. Even bishops and weavers, I find, when caught in colour, are not good livers, though when captured out of colour do well, but even then with them one has to expect some loss among fresh-caught birds. However, this is generally slight and it is never long before these birds

settle down, after which they stand almost anything in the way of travelling and roughing it.

A page or two back I called these little Africans "ready-made cage-birds." In addition to their general adaptability to circumstances, an almost incredible happening this year gives me good reasons for so saying. At one time I had in camp in one cage twenty-five birds, including the ten spotted firefinches. One morning the "boy" left the door open and out they all got. Before sundown all, except two, were back again, the exceptions being a couple of orange-cheek waxbills, which went right away at once. All the rest came back to their cage sooner or later and were easily recaptured without any trap, merely by leaving a cage containing seed and water with an open door, and shutting this as soon as a bird or birds went in. This, too, in their own country and close to their native "bush." The fact seems to be that after a little time in captivity, the birds get so accustomed to the constant supply of food and water, that having once got into the habit of eating and drinking, particularly the latter, at all hours, they cannot easily do otherwise again, if they happen to escape. In freedom, most of our birds only drink morning and evening, some indeed only at one of these times, and spend the rest of the day foraging for food, very often far away from any water. Under the easy conditions of cage-life, as far as victuals are concerned, they soon lose their regular habits.

OBSERVATIONS ON THE BIRDS IN A SUBURBAN GARDEN.

By O. J. STONE.

The suburbs are often considered to be exceedingly dull places and it may therefore be of interest to some to know that more bird-life can be seen in them than is generally supposed.

In giving a short account of the birds noticed in a Sydenham garden, I lay myself open to criticism, as my observations are only casual ones and I do not pretend to have made a systematic study of the subject.

Taking the birds in rough groups, and the commoner ones first, we have the sparrows and ordinary finches. Greenfinches are regular inhabitants, though more often heard than seen, and we have seldom found their nest. This by no means applies to the chaffinches, which build fairly freely in the garden, and are heard and seen in large numbers. I remember once letting a hen escape, when from every direction cock birds arrived, till within a few minutes there must have been more than a dozen round the hen in a small fruit-tree.

The most interesting nest of this bird which I have found occurred in the ivy, on a low fence, just near the gardener's shed. We generally come across several in the fruit or May-trees, and one pair nearly always nests somewhere near the house and becomes tame when feeding young. The parents then come to beg at the tea-table in the garden.

The contrast between the manners of the chaffinches and sparrows is noticeable. The former come confidently, and with a very superior hop; the latter approach suspiciously and in a common way, and, after much beating about the bush, fly off triumphantly with a crumb, evidently pleased at having outwitted us. It always reminds me of a boy stealing apples from a garden to which he has been invited to pick the fruit. It seems to me very curious that the rather dainty chaffinches should condescend to crumbs, while the greenfinches, which, in an aviary at any rate, are such general feeders, never beg and are, in fact, never seen near the ground at all.

Occasionally we see bullfinches, and once I caught a nice young cock, but this year is the first in which I remember seeing a pair together. They were sitting together on the bean-sticks.

Yellow-hammers have only been noticed once, when we caught two hens in a cage-trap near the aviary. Coming now to the commoner soft-bills we find a larger assortment. I have always looked upon thrushes and blackbirds as being a part of the garden, so that I was quite surprised when a friend of mine remarked on the number of blackbirds seen at one and the same time on the lawn.

The Starlings, also, work the garden systematically, in small flocks, and used, I am afraid, to form the readiest game for catapult and airgun.

There seems to be a robin for every clump of bushes, and occasionally, as last year, one finds a young bird tame enough to take a mealworm or caterpillar, especially a bright green one, from the fingers, without previous coaxing. I believe these extra tame ones generally fall victims to the cats which populate this neighbourhood very thickly. There is always one robin to be found in the rhododendrons near the aviary, and he seems to be always on the watch, for, as soon as I come out, he is there, in case there is to be a distribution of mealworms. He will tackle a cockroach, large enough to strike fear into the heart of a cardinal or a wagtail. This spring I was glad to notice his unselfishness in preparing these delicacies for his mate, and this is especially satisfactory in the case of a bird which can only be regarded as self-centred, naturally.

Hedge-sparrows occur in large numbers, but go quietly about their business for the most part.

Wrens, blue and great tits are common, and I believe the cole-tit occurs frequently. The long-tailed I have only seen once personally and then they were high up in an elm tree.

Up to last year I had no idea that garden-warblers were to be found in these parts; but last summer one was found on the lawn, apparently in some sort of fit. She turned out to be a hen and revived in a cage, taking well to artificial foods, and after surviving through the winter, died soon after being turned into an aviary in the spring.

Every year we see a few birds, which we take to be willow-warblers, although they are not heard to sing. They are seen especially about September; a good many are very bright yellow and may be young ones. Sometimes they are fairly tame and sit on top of the aviary. I have also seen them, together with blue-tits, taking a bath under the lawn-spray. Another bird, which is fond of a bath, is the spotted flycatcher, a great favourite of mine. They may generally be seen at the right time of year and nearly always in the same place, on a low iron railing, from which it is very pretty to see them catching flies. The gardener tells me that he has sometimes so drenched these birds when they have come for a bath under the hose, that he has picked them up and placed them in the sun to dry. The birds evidently like him (the gardener) as I

have seen a robin sit on his boot while he has been digging, and also on the barrow taking a ride.

We generally count on having at least one pair of golden-crests about, they mostly frequent the rose-beds after the green-fly, and I have never found their nest; probably they come from a distance.

There is one small soft-bill which we have not seen now for some years and that is the tree-creeper; it used however to be seen here at times. Blackcaps seem to come more frequently than one would expect in such a neighbourhood. Three years ago I saw them for the first time,—about August or September—a nice pair in an elderberry tree quite close to the house. Next year they were there again for two or three days, so that it is probable they were getting restless about migration. Last year I heard one calling, but this year, about June, I heard one singing well in a garden close by, and only last Sunday, while engaged in hunting caterpillars for my aviary, I saw a beautiful cock in an apple-tree within a few yards of me. This brings me to the end of the small birds, and it only remains to mention the crows and woodpeckers, and last, but not least, the woodpigeons, much hated by the gardeners about here. The woodpigeons nest in several places in the garden, especially in an ivy-covered oak-tree.

We have not seen the green woodpecker here for some years now, but we have had quite a rarity this year in the person of the lesser spotted. I heard one tapping away constantly in a big oak-tree, but never saw him till Mr. Staines came in one day and pointed him out on a top dead branch. After that I frequently watched him with and without the aid of glasses. He then moved to another tree, so he may come back day after day till he has exhausted the stock of insects in that dead branch. We are really rather pleased at being able to boast of this bird in a suburb.

Of the four crows which have been seen here, two have been known to nest, and two years ago a pair of jays, which frequented the garden, were supposed to have done so too. The rooks never will stay, though they often examine our elm trees for suitable nesting-sites. There is a rather curious point in connection with this nesting question. Almost every year rooks are seen about the

trees, and one year a large party of them stayed about two hours. However, they did not like the place and it remained for a pair of crows to try their luck three years ago. The pair nested in some tall elms with hollow trunks and all seemed well; but, later on, we found three dead youngsters fully feathered in various parts of the garden. The following year they tried again in the next tree, and this time one live youngster was found below the tree and its parents fed it for some days in a cage, and then it died. This year the parents have moved to a tree at some distance. Now it seemed to me that the rooks in council were wise enough to avoid those trees while the crows were not. But lately Mr. Kay Robinson told me that the matter is probably attributable to the brown owls, which we have for some time suspected of living in these trees, and their presence may also account for the desertion of this place by the jackdaws which always used to nest there.

I fancy, however, that the owls are not completely happy, as I turned out a pair of squirrels two years ago, which reared a family of three. It seems that they also took a fancy to these hollow trees, for the owls now frequently hoot during the day, which may be a sign that all is not peace at home, and there is little doubt that this is due to the squirrels, who, as everybody knows, are selfish enough to sacrifice the convenience of others to the gratification of their own small wishes.

I find that I have forgotten to mention the cuckoo, which is generally heard, but, as far as I know, has not been seen in our garden.

REVIEW.

BRITISH BIRDS. THORBURN.

[BRITISH BIRDS, written and illustrated by A. Thorburn, F.Z.S. With 80 plates in colour, showing over 400 species. In four vols. Vol. II. Longmans, Green & Co., 39, Paternoster Row, London, 1915].

The second volume has been published (£1 11s. 6d.) maintaining the excellency of the first, and deals with crows, larks, swifts, nightjars, woodpeckers and cuckoos: whilst owls and other birds of prey occupy an important portion. The frontispiece of the golden

eagle is thoroughly up to the high standard of Mr. Thorburn's paintings, the splendid bird being depicted in flight, skirting a snow-clad mountain slope and carrying in its talons a hare in winter pelt. The eagle owl is also honoured by a full-length portrait, solitary, except for his mate with wide-spread pinions in the distance, amongst the pine woods of the higher altitudes of the continent where this fine owl is found.

One wishes the white-tailed sea-eagle and others could have also figured by themselves, but the allotted space prevents this. The paintings of the Greenland and Iceland falcons gives one however another beautiful picture, which is difficult to obtain in the case of most of the plates where one has a pot-pourri of a genus.

If one is to criticise at all, perhaps it may be that the figure of the male cuckoo is not so convincing, for the bird does not seem to be grasping the bough on which it is perching, and the eye is slightly languid in expression. Mr. Thorburn might have depicted our spring favourite as uttering its sonorous call, giving the eye that glitter of gold which it has. By-the-bye, do our kingfisher's crown-feathers stand away from the nape of the neck in a crest-like formation? and the blackbird in the talons of the sparrow-hawk looks too large compared with the slayer thereof! But such criticism should not prevent aviculturists and lovers of our native birds in their wild state from adding Mr. Thorburn's fine work to their ornithological library.

H. D. A.

ENGLISH NAMES FOR THE PARROTS.

By Dr. E. HOPKINSON.

(Concluded from page 41).

YELLOW CONURE, *Conurus solstitialis*. Old names, *ANGOLA YELLOW PARROT, *MEXICAN YELLOW PARROT, *BRAZILIAN YELLOW PARROT, VAR. B. (Latham); SOLSTITIAN PARROT, *YELLOW PARROT. Native name, " KESSI-KESSI."

*YELLOW MACCAW-PARROT, Latham's name for the GOLDEN CONURE.

*YELLOW PARROT, *see* YELLOW CONURE.

*YELLOW PARROT, ANGOLA, *see* YELLOW CONURE.

*YELLOW PARROT, BRAZILIAN, *see* GOLDEN CONURE.

*YELLOW PARROT, VAR. B., BRAZILIAN, *see* YELLOW CONURE.

*YELLOW PARROT, MEXICAN, *see* YELLOW CONURE.

YELLOW-BANDED PARRAKEET, BAUER'S PARRAKEET.

YELLOW-BELLIED AMAZON.

YELLOW-BELLIED BROADTAIL, the next (1).

YELLOW-BELLIED PARRAKEET. (1)=*Platycercus flaviventris*, also known as the YELLOW-BELLIED BROADTAIL. The "GREEN PARROT" in Tasmania. Old names · *NEW CALEDONIAN PARROT (Latham), ? his *SULPHUR-HEADED PARROT, *VAN DIEMAN'S PARROT, and *VAN DIEMAN'S PARROT, VAR. A. (=the young bird). (2) *See* DWARF CONURE.

"YELLOWBILL."

"YELLOW-BILLED PARROT," ¹ *see under* AMAZON, RED-THROATED.

"YELLOW-BREASTED CONURE," a common dealers' name for the GOLDEN-CROWNED CONURE.

YELLOW-CHEEKED AMAZON.

YELLOW-CHEEKED CONURE, *see* SAINT THOMAS' CONURE.

YELLOW-CHEEKED PARRAKEET, the STANLEY PARRAKEET.

YELLOW-CHEEKED PARROT. (1) Latham's name for the above. (2) Also used by him for an AMAZON, probably the ORANGE-WINGED; *see under* AMAZON.

YELLOW-COLLARED PARRAKEET. (1) The YELLOW-NAPED PARRAKEET. *(2) Latham's name for the BLOSSOM-HEADED PARRAKEET.

*YELLOW-CRESTED COCKATOO, *see under* SULPHUR-CRESTED C. (2).

*YELLOW-CROWNED PARROT, a name of Latham's; applied to two species of Amazon, the YELLOW-FRONTED, and the common BLUE-FRONTED A. *See under* AMAZON.

YELLOW-EARED BLACK COCKATOO, *see* BLACK COCKATOO (1).

*YELLOW-FACED PARRAKEET, *see* SAINT THOMAS' CONURE.

YELLOW-FRONTED AMAZON.

YELLOW-FRONTED PARRAKEET, *see* GOLDEN-CROWNED PARRAKEET (2).

YELLOW-FRONTED PARROT.=*Poeocephalus flavifrons*, a near relative of the SENEGAL PARROT.

*YELLOW-HEADED AMAZON PARROT (and VARS. A. & B.), *see under* AMAZON, YELLOW-FRONTED.

"YELLOW-HEADED AMAZON, SINGLE," *see under* AMAZON, YELLOW-SHOULDERED.

YELLOW-HEADED CONURE.=*Comurus jendaya*, also known as the JENDAYA CONURE and JENDAYA PARRAKEET, from its native name "JENDAYA." The YELLOW-HEADED PARROT of Latham, whence an occasional book name, YELLOW-HEADED PARRAKEET.

*YELLOW-HEADED CREATURE, *see under* AMAZON, YELLOW-SHOULDERED.

- *YELLOW-HEADED MACAW, the TRICOLOUR MACAW, *see under* MACAW.
 YELLOW-HEADED PARRAKEET, { the YELLOW-HEADED CONURE.
 YELLOW-HEADED PARROT. }
 YELLOW-HEADED PARROT, VAR. A., *see under* AMAZON, BLUE-FRONTED.
 YELLOWISH-GREEN LORIKEET. = *Trichoglossus flavicans*.
 YELLOW-LORED AMAZON.
 YELLOW-MANTLED PARRAKEET. = *Platycercus splendidus*, SPLENDID
 PARRAKEET (Gould).
 YELLOW-NAPED AMAZON, the GOLDEN-NAPED AMAZON.
 YELLOW-NAPED GIANT AMAZON, ditto. *See under* AMAZON.
 YELLOW-NAPED PARRAKEET or YELLOW-COLLARED PARRAKEET. =
 Barnardius semitorquatus. In Australia known as "TWENTY-EIGHT,"
 "TWENTY-EIGHT PARRAKEET," "TWENTY-EIGHT PARROT," and
 sometimes as "RINGNECK."
 "YELLOW-NECKED AMAZON," *see under* AMAZON, GOLDEN-NAPED.
 YELLOW-RUMPED BROADTAIL, the next.
 YELLOW-RUMPED PARRAKEET. = *Platycercus flaveolus*, also known as
 the YELLOW-RUMPED BROADTAIL.
 YELLOW-SHOULDERED PARROT, *see under* AMAZON, ORANGE-WINGED.
 YELLOW-THIGHED CAIQUE.
 YELLOW-THROATED HANGING PARRAKEET, the JAVAN HANGING PARRA-
 KEET, *see under* HANGING PARRAKEET.
 YELLOW-THROATED PARRAKEET (Latham), the TOVI PARRAKEET.
 YELLOW-VENTED BLUE-BONNET PARRAKEET, *see under* BLUE-
 BONNET.
 YELLOW-VENTED PARRAKEET, ditto.
 YELLOW-WINGED PARRAKEET, *see* WHITE-WINGED PARRAKEET.
 YELLOW-WINGED PARROT, *see under* AMAZON, YELLOW-SHOULDERED.
 "ZEBRA GRASS-PARRAKEET,"
 "ZEBRA PARRAKEET," old fashioned popular names for the BUDGERIGAR.

CORRESPONDENCE, NOTES, ETC.

HUMMING BIRDS IN CAPTIVITY.

A member writes to correct the remarks as to humming birds in captivity. To begin with, it appears that Mr. A. Ezra was not the first to be successful, but our French member who has a wonderful collection of these birds in magnificent condition. He however attributes a large amount of his success to Mr. Ezra's original treatment of sunbirds, whose food is the same as that of the humming birds.

It was in February of 1914 that our French member set out to bring back his first hummers, which he successfully did. But long before this they were imported.

In 1878 there were numbers exhibited at the Paris Exhibition and offered for sale in small cages.

Monsieur Chiapella was partly successful seven years ago. Some twenty humming birds were kept by a woman in Paris, perhaps some of those that were in the 1878 exhibition; and *six years* later 17 out of the 20 were still alive. As far back as June, 1876, Milne Edwards quoted the case of Monsicur Vallet who kept about 50 humming birds, including five to six species, flying in a large aviary, but he refused to divulge the secret by which the birds were fed.

One of the members of the family of Rothschild in Paris also received some, but they only lived a fortnight; that was again in 1878.

In 1885 a French lady received two from Vera Cruz, one of which lived for a year, and the other a little over that period. As is known, the late Mr. Cholmondeley, of Condover in Shropshire, had a lot of humming birds about the year 1878, which were kept in a conservatory, but as their food was not then understood, they died after a while; being given insects, the supply of which could not be sufficiently maintained.

It seems a pity that when Mr. Pam imported some a few years ago, it was apparently not known at the London Zoological Gardens how these lovely birds had been successfully kept in captivity in Paris many years before.

H. D. A.

ADULT SPOTTED EAGLE IN HEREFORDSHIRE.

A fine specimen of an adult spotted eagle (*Aquila nevia*) was found on the Brinsop Court estate (near Hereford) by the Editor's gamekeeper, on the 12th of November. The bird had been wounded, evidently by a neighbour's keeper, for it was close to the boundary line in one of the woods which crown the hilly ground. The eagle lived for two days but in addition to one wing being shattered near the body, it had evidently received internal injuries. There have only been about a dozen instances recorded of this bird's presence in the British Isles, and it is to be deplored that such a rare visitor should be ruthlessly and stupidly destroyed. It would probably have preyed chiefly on the numerous rabbits, and must have been a fine sight on the wing, although not so large as the golden eagle. The Epirus, Turkey, etc., seems to be one of the chief habitations of this species. The specimen in question was a rich dark brown in colour, with whitish spots, not numerous, on the secondaries, etc. and whitish upper tail-coverts. Probably the bird was blown out of its course in the gale that occurred at the time it was found; from France may be.

PROLIFIC GOULD'S FINCHES.

Mr. BERNARD THOMASSET writes word that a pair of his Gould's finches have reared seventeen young ones this season, the same hen having brought off thirteen in 1914. Mr. Thomasset suggests that these numbers are quite exceptional.

VICTORIA CROWNED PIGEONS.

SIR,—Would some member kindly answer these questions?

- i. What sum would purchase a pair of Victoria Crowned pigeons?
- ii. Where could they be obtained?
- iii. Do they need artificial heat in winter time, and what food, etc.?

Yours, etc., GUY FALKNER.

The following reply is given.

It is doubtful if there are any Victoria Crowned pigeons to be obtained now. Their price would be about £15 15s. a pair, or even £20. They do best in a large aviary with grass, and need a snug shelter in winter time with peat moss litter and bracken on the floor, although they can endure a good deal of cold. Their food is grain of various kinds, but like many of their family, they are fond of earth and mealworms, as well as different berries. They are ground-lovers, but perch for roosting.

BREEDING OF THE OCCIPITAL BLUE PIE.

We regret that Dr. AMSLER'S hopes of having been the first to breed the Occipital Blue Pie (*Urocissa occipitalis*) have not been realized. This species has already been bred in Lord Lilford's aviaries in 1914.

FEEDING A KINGFISHER.

SIR,—I had a Kingfisher sent me about eight weeks ago, he was caught in High Street, Maidenhead; it appears he flew about the street and settled on some iron railings and a cabman put his hand upon him. I suppose the bird was dazed and frightened, for this species is generally gone like a flash when anyone approaches it closely. However, he is in excellent health and has become quite tame. I am trying an experiment and that is to see if he will do on any other food besides live fish and I have got him to eat mealworms and he really likes them and *does well* on them; he has about ten large minnows or bleak per day and also a dozen large mealworms, sometimes only half-a-dozen fish per day, and then I give him two dozen or more mealworms and he is as bright and smooth in plumage as if out wild. If he continues to do well and keep in perfect health on a diet of mealworms, then anyone who has a Kingfisher need not worry about its food when the rivers are in flood and no fish to be had for a few weeks.

P. F. M. GALLOWAY.

A BEAUTIFUL SUGAR-BIRD.

Dacnis berlepschi, described and figured in colour in "Novitates Zoologicæ" Vol. VIII., 1901, is a bird much to be desired. Its size appears to be that of a British hedge accentor, the male having the whole of the upper parts, including the upper breast, a gorgeous hyacinthine blue with shaft-stripes of silvery turquoise blue on back, rump, and front of breast.

The lower part of the breast is brilliant fiery-red merging into yellowish buff on the abdomen.

Hab.: N.W. Ecuador (Lita, Carondelet, etc.)

Perhaps Mr. Goodfellow knows it.

COLOUR IN HYBRID DUCKS.

I lay no claim to being scientific in the sense in which, I take it, our Editor meant in a recent number of the magazine, but I am writing this in the hope that somebody who is scientific may be able to expound some theory on colouration in hybrid ducks, which I frankly admit defeats me.

If one crosses a pintail drake with a wild duck, the result is, what I think most people would expect, *i.e.* a bird just about half-and-half (I am speaking only of male hybrids) the white of the pintail's breast crossed with the chocolate of the mallard's produces a pale pinkish brown, in most cases white at the bottom of the neck running up into a point at each side of the neck as in the pure pintail; the rest of the plumage is half mallard and half pintail, to such an extent that anyone with any knowledge of ducks could tell at a glance how the bird was bred.

Thus in the hybrid pintail \times wild duck we get *chocolate* crossed with *white* producing *pale pinkish brown*.

Now if we cross a rosybill drake with a wild duck, which colour should we expect to get on the breast of the male hybrid? A rosybill's breast is jet black and a mallard's chocolate, so surely we might expect some colour *darker* than chocolate, yet the colour of the hybrid's breast is a very pale brown, several shades paler than a mallard's, fading down to nearly *white* towards the belly. Thus *black* crossed with *chocolate* produces *pale brown*. This is the same in the hybrids between common pochards and wild ducks.

Now take the hybrids produced by crossing a common shelldrake with a ruddy shelldrake. The hybrid's head and neck is what one might expect, black with a buff patch on each ear; but take the upper part of the breast, which, as everyone knows, is pure white in the common shelldrake and chestnut in the ruddy shelldrake, so judging by the result of white crossed with chocolate (as in the pintail hybrid) we might expect a pale buff running into pure white at the base of the neck. Yet the colour we do get is a fine rich chestnut, considerably *darker* than in the pure ruddy shelldrake and with the tiniest white ring round the base of the neck, and even this is absent in about 50 per cent. Then on the lower breast and sides, where the chestnut ring goes round the common shelldrake's body and is also chestnut in the ruddy shelldrake, the colour of the hybrid is *paler* than in the upper breast! The flanks (again white crossed with chestnut) are palish brown with tiny black pencillings on the outer edges of the feathers; also in the hybrids there is no sign of the black shoulders, so conspicuous in the male parent, the upper parts of the body being practically the same uniform chestnut as in the female parent, though in female hybrids the feathers on the back are tipped with black pencillings. Taking the under tail

coverts of the hybrids between rosybill (white) a mallard (black) one gets a dirty white interspersed with brown. So also are the undertail coverts of hybrids between pintail (black) a white-eyed pochard (white), again the same dirty white interspersed with brown.

Thus to sum up, we have *white* crossed with *chocolate* produces pale pinkish brown. *Black* crossed with *chocolate* produces pale brown. *White* crossed with *chestnut* produces a darker and richer chestnut. *Black* crossed with *white* produces a dirty white mixed with brown.

These results, to an unscientific person like myself, appear rather surprising, and I hope some scientist among our members may be able to give an account of the rules governing colour in hybrids. HUGH WORMALD.

PREVIOUS BREEDING OF BEARDED REEDLINGS IN CAPTIVITY.

SIR,—With reference to your note concerning the breeding of bearded reedlings by Mr. Richardson Carr, may I suggest that in the awarding of a medal to a member, some reasonable limit be considered as to what constitutes an aviary? When one can enclose a very large area where practically a full supply of the necessary live food used in rearing young is obtainable by the parent birds themselves, there is but little credit attached to the success. It is quite a different matter when such food has to be frequently supplied in the first instance by the owner of the birds.

This, as everyone knows, entails a large amount of attention and expense, and is fraught with difficulties that do not present themselves in a place sufficiently large in area as to teem with live food.

In considering such a matter, of course the species and size of the bird would have to be taken into consideration, but when the average small passerine is turned loose in an enclosure in half a meadow or large shrubby garden, the main commendation seems attached to the enterprise of the owner in spending enough money to enclose such a place for the purpose.

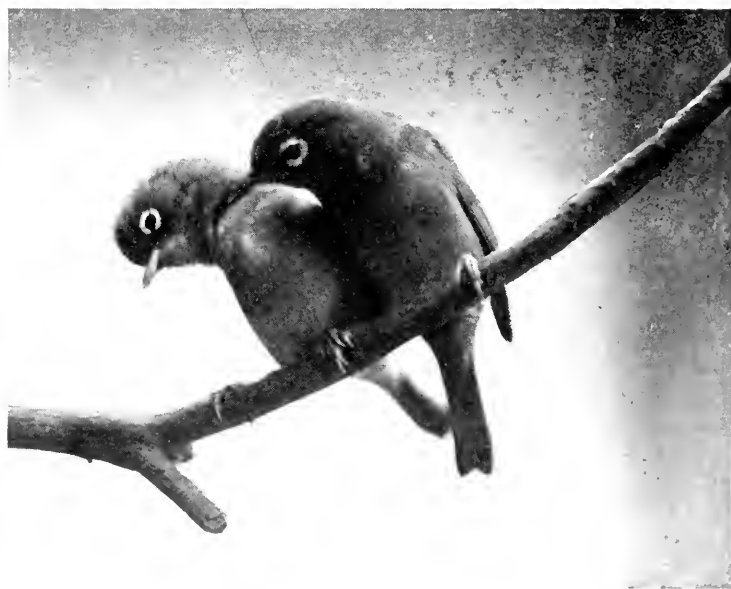
Yours, etc., ALLEN SILVER, F.Z.S.

We agree that Dr. Lovell-Keays has most fully merited the award of a medal, and it is certainly a moot point as to whether he has not really bred the bearded reedling for the first time in what can be properly termed captivity, a point which should be, if possible defined. If no food of any kind at any season of the year has to be placed in the enclosure that might make the distinction.

We hope that members will give us their opinion on the subject, and that the matter will also be discussed by the Council.

As Mr. Silver truly says, the species and size of the bird would have to be taken into consideration, wherein lies one of the difficulties as to a medal being awarded; for instance, supposing Mr. Ezra breeds humming birds in a London flat, a medal is awarded him, and then a member writes that he or she has already been successful with them in a vast conservatory where amongst many flowers they found their own food, what then?

EDITOR.



THE AFRICAN WHITE-EYE
(*Zosterops capensis*.)

Photos by Geo. Lowe.

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THE GENUS ZOSTEROPS.

WHITE-EYES.

By Dr. ARTHUR G. BUTLER.

This group of dainty warbler-like birds was originally characterized by Vigors and Horsfield in the fifteenth volume of the Transactions of the Linnean Society; it was placed by different authors among the bulbuls, tits, honey-eaters and sunbirds, and eventually separated from all as a distinct family *Zosteropidæ*: its numerous members occur in the Old World "from Africa to most of the islands in the Indian and Pacific Oceans, and northward in Asia through India and China to Amurland and Japan" (Newton).

The term white-eye is used as the trivial name in scientific works, but the dealers of England, adopting a translation of the German appellation—*brillenvögel*, call the species "spectacle-birds," a very apt term when one notes that the eyes are not white but surrounded by a white ring: nevertheless the name has before now led to confusion between the White-eyes and the so-called Spectacle-finch of the genus *Sporophila*.

The prevailing colour of the upper parts in *Zosterops* is greenish olive or mouse brown, the lower parts being yellow, sometimes with the throat white and more or less tinted with bay on the flanks; the length of the bill varies a good deal in different species: the wings are moderate in length, the tail short, the legs fairly slender, but the toes strong. In its movements it is active and lively and in some of its actions much resembles the tits, for which

reason probably Horsfield called the Indian species the white-eyed tit, though he placed it in the *Leiotrichinæ*.

Considering the number of species (Dr. Sharpe indicated 88 in his Museum Catalogue in 1883) it is remarkable that so few have been imported into Europe: excepting during the breeding season they are sociable in their habits, moving from place to place in small companies,* perhaps family parties, and therefore should not be difficult to secure in fair numbers, yet the four better known white-eyes of Australia, India, China and the Cape are those generally offered for sale by the British and Continental dealers.

In their flight the white-eyes are quick and darting according to Gould; I kept my pair of Chinese birds in a flight-cage where it was impossible to form a just estimate of their speed when on the wing. When flitting from twig to twig examining the under surface of leaves or the tubes of various blossoms in search of insects they assume similar attitudes to those of the titmice. In addition to tiny insects and their larvæ these birds feed largely upon soft fruits and berries: Messrs. Stark and Selater state that the Cape white-eye visits various flowers for the sake of the honey, but it seems more probable that it seeks for the small insects attracted to the honey.

The nest of *Zosterops* is always a beautiful object, though like most cup-shaped nests it varies considerably both in depth and in the materials of which it is formed; more often than not it is formed largely of moss, wool, and fine grass, ornamented outside with lichen and lined with horsehair, or with fibrous roots and grasses, but at other times it is more flimsy in construction and consists chiefly of dry grasses and attached to the supporting twigs by spiders' web. In some cases it is placed in a fork, in others it is suspended like a hammock between a forked twig and occasionally it appears to be firmly bound to a single twig.

The eggs are pale blue, greenish blue, or bluish green and unspotted, their number appears to vary from two to five in a clutch, although most accounts lead one to the conclusion that two or three is the more usual number. The situation of the nest is usually in a

* Apparently when they migrate these birds collect into large flocks, sometimes associating with tits.

bush or low-growing scrub. Both parents take part in the work of incubation but not simultaneously, each therefore is able to cater for itself, and consequently there is no need for the cock to feed the hen on the nest.

The songs of these birds are not loud but are pleasing: Campbell describes that of the Australian species as a soft, sweet chattering warble, as if singing inwardly or to itself; Russ says that the song of the Indian species resembles that of the Grass-



Photo by Geo. Lowe

hopper warbler; my Chinese bird sang a Cicada-like trill, Dr. Brauns says that the Japanese species sings not very loud, but charmingly: the call-note is a tiny staccato chirp, which I rendered tsip-tsip-tsip in the case of *Zosterops simplex*; it reminded me somewhat of the note of our gold-crest.

Zosterops has been accused of being an orchard pest, because it ruins a certain amount of fruit, such as cherries for instance, by piercing the pulp with its bill; but if it does take toll of the fruit, no doubt it more than pays for it in the scale-insects and other forms of blight which it devours: on this ground therefore it unquestionably deserves protection.

The white-eyes are by nature tame and confiding birds,* but they resent interference with what they regard as their rights, and Mr. Campbell's account of the manner in which one of these delicate little creatures stabbed an interfering Sparrow to the heart with its bill proves that *Zosterops* is quite as quick at bayonet practice as its human compatriots: perhaps it might be well to bear this in mind before associating it in an aviary with meddlesome birds, it might be disastrous for any who attempted to rob it of building material when nesting.

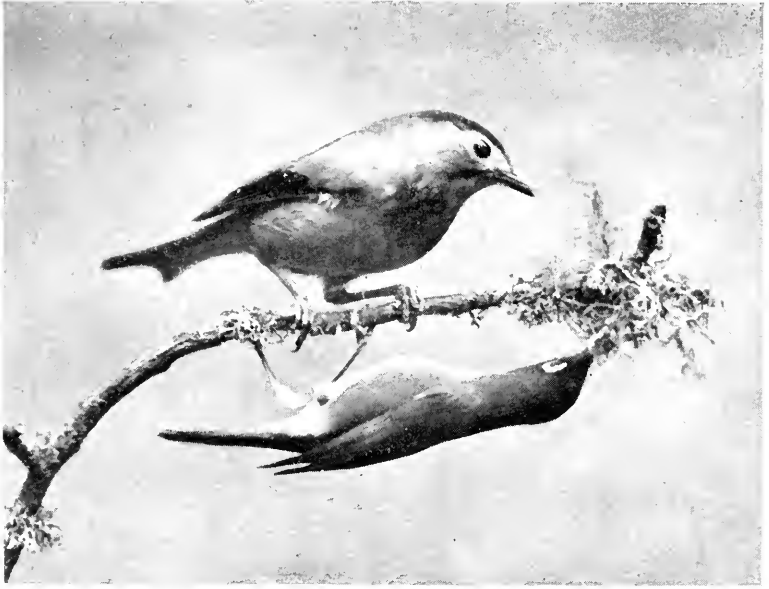
After the breeding-season these birds visit orchards and gardens where they regale themselves chiefly upon fruits and berries, though they doubtless still continue to pick up such small insects and caterpillars as they come across during their rambles. In captivity a good insectivorous mixture with soft fruit, green fly and small smooth caterpillars or living ant-cocoons seem to suit them well; potato chopped up with yolk of hard-boiled egg and moistened sponge-cake make a pleasant variety in diet.

Like others of the smaller insectivorous birds the white-eyes prefer not to settle on the ground, but they will alight on the edge of a food-pan to feed although it is natural for them to obtain their food while clinging to a twig, either above or below it. When roosting at night a pair will sit close together in the most affectionate manner like many other little birds, in which respect (according to my experience) they differ entirely from at least some of the titmice.

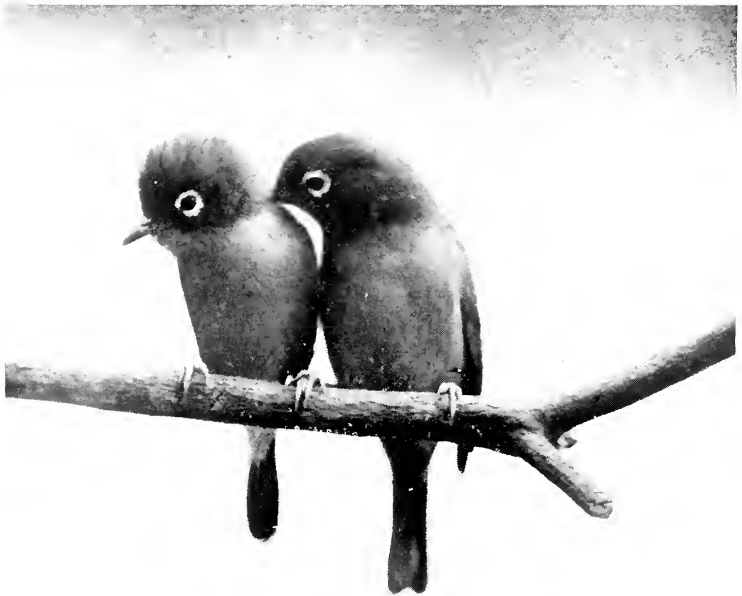
Various essays have been made both on the Continent and in this country to breed different species of *Zosterops*, but not always with success. To my mind the most delightful account of the successful breeding of an African species (*Z. viridis*) was that published in last year's volume of our Society by Dr. L. Lovell-Keays, and I was exceedingly sorry when I heard that the author had recently put his collection of birds upon the market; I only hope that this does not indicate that we shall have no more interesting articles from his pen.

Our Editor wrote to say that he had acquired a lovely pair of the Australian species from the above collection, and as he

* See Journ. S. Afr. Ornith. Un., Vol. 3, p. 18.



HILL TIT (*Leiothrix*) AND *Zosterops capensis*.



AFRICAN WHITE-EYE.
(*Zosterops capensis*.)

Photos by Geo. Lowe.

possessed some most charming photographs of *Z. capensis* by Mr. G. Lowe, which he wished to publish in the Magazine, he thought I might like to write an article on the genus to accompany them: of course I was only too glad to do so.

SPRING IN NEW SOUTH WALES.

A DAY IN THE BUSH AMONGST THE BIRDS.

By G. A. HEUMANN.

A day out in the bush on a fine spring day is truly a great treat for the naturalist, especially for him who loves to observe bird-life during the mating season. The Australian spring set in very early this year; wild flowers are plentiful, shrubs and flowering trees well forward and the birds have commenced breeding early. It is said "the early bird catches the worm," which may be applied to anyone wishing to see Nature at its best. One must get up early, when the lawns and shrubs are still heavy with a fine greyish dew and the spiders' webs, busily prepared during the night, appear to be studded with thousands of diamonds as the sun slowly rises from behind the hills. To me it seems as if the earth is bathed in torrents of tears, shed so profusely at present. Nearly all the birds which have been away during the colder months are now with us again.

The lovely notes of the thickheads, both the rufous and yellow-breasted, are floating up from the gully to the hill upon which my home stands. The melancholy call of the fantail cuckoo is now heard everywhere. Upon the telephone wires the grey fly-catcher whistles its love song to his mate. Birds everywhere, and one often wonders where they all come from. As the sun rises they become more animated. The love of life and delight of living seems to permeate them. Now the spinebills are coming to hover like big moths over the scarlet *Salvia* blooms until discovered and chased by one of their species. The yellow-tufted honey-eaters, a very plentiful bird about here, are chasing, with vociferous protestations, a fantail cuckoo, their natural enemy. It seems to me these birds are fully aware of the identity of this bird with the

culprit that lays his egg in their nest. The peaceful doves are much in evidence, their cooing call from the top of trees sounds from everywhere. In one of the big gum trees in my paddock a peewit is already setting, and a pair of black-faced cuckoo shrikes are every morning busily inspecting which tree might suit them best for their home. A pair of little ground diamonds are just beginning to make the burrow for their nest in one of the trenches in my garden. These are exceptionally sweet little birds, their call note is very sad. A pair of them have for years made a nest in a staghorn hung up under the verandah in the house of a friend and never minded people coming and going by them. The curlews on my lawn are now mournfully screeching their love song, and the spurwing and little black-breasted plovers join them in the concert. The cries of the cagous could raise the dead, and it is a good thing that we have no immediate neighbours. Wild jackasses come to visit our tame ones and to laugh with them from fence and trees. The little blue wrens, up to lately travelling in big families of a dozen or more, are now split up into pairs. One pair has stayed in our shrubbery and we know where their nest will be.

Already the beautiful note of the blood-bird high up on the gum trees, where the first spring blossoms have opened, floats through the air. Sometimes the mating call of the mistletoe birds reach the ear as they fly high up almost invisible to the eye and give proof of how far reaching these mating calls are. Watching a number of honey-suckers in the garden of my friend the other day I was interested in a number of New-Hollands which had come probably from quite a long distance to inspect the Warratahs which usually bloom in September. Not being out yet I noticed one of the birds trying to assist the flower petals to open out by manipulating them by his long slenderly curved bill. The remarkable thing is that Warratahs are wild flowers, indigenous to the Australian scrub, seldom cultivated in a garden. Around Sydney—within many miles—they are destroyed, and yet, when this little patch which I speak of is in bloom, quite a number of species of honey-suckers come to have a drink. What memory these birds must have to recall that last year this time they had visited this spot, found it good and so come again and again as the season comes

round. Day after day they pay their visit of inspection, impatiently awaiting the time when the flowers are open at last.

But not only the birds and flowers give evidence of this early spring. The ants, kept underground during the winter, have come out, and the large blue-tongued lizards, eight in number, pets of my little daughter, after sleeping these last four months between bags in a cardboard box, have left their recent home and may now be seen daily basking in the sun. It is a lovely time, springtime in Nature, and how happy one might be were it not for the awful catastrophe which has befallen the world.

As is usual with me, I spent again last Saturday in the bush with my boy. Taking the western train early in the morning we alighted at a small platform about 40 miles from Sydney. It was an ideal, a glorious morning. Unfortunately, little original bush is left in this district, farms and cultivation are dotted all over the plain, but the few acres of rough country harbour all the birds originally found in these localities. Here were still a few rosella parrakeets chattering away in the trees, in spite of the persecution of the so-called sportsmen. We noticed soldier birds carrying nesting material, and once in a way we flushed a pair of Australian quail. A nest of yellow-tufted honey-eaters with a clutch of three prettily-marked eggs we passed on the way, the old birds making a dreadful fuss because we peeped into their nest. Occasionally we came across a complete or half complete nest of tits, some already with young, whilst the nests of the Sydney waxbill (redhead) or the diamond sparrow could escape nobody's attention; they were very plentiful, but generally high up compared to the tits, which built a lovely little hanging nest, beautifully lined; the redheads and diamonds build a clumsy ugly structure. A pair of crows had built their home high up upon a big gum tree and I dare say many a little bird in that locality will suffer from their attention.

Whenever we met an interesting sight we stopped to observe the habits of the birds, and to enjoy a sun bath like the birds themselves on this glorious spring morning. On these occasions we watched the building of the nest of the tiny red-capped robin, very low in the fork of a tree. Once in a way the little hen, after having put a few touches to it, would sit in the nest to make it a good fit

for its shapely little frame. For an outside covering she had brought along tiny bits of hardened white moss, such as one finds on old trees. To an unobservant eye the nest was absolutely safe. While this little hen was busily working, her mate in his gorgeous attire of scarlet breast and red cap was enjoying himself in the sunshine catching insects. I could not help thinking how alike Nature is in man or beast; in many countries even now the women do the hardest share of the work, the British race being pretty well the only one where women enjoy the liberty and respect due to them. Perhaps even amongst the bird-world some day a suffragette movement may be inaugurated, and then there is no telling what will happen to the cock birds. The yellow robin (popularly known as "yellow Bob") was already setting; they are birds I always liked well, silver grey head and back and bright yellow front. They are very cheeky little birds, coming to the garden and are not afraid to catch up a mealworm thrown to them.

Transgressing a little, I must tell you that whilst I am writing now, a melodious grey thrush is sitting on the railings just outside my verandah whistling gloriously. This pair is always round my house, though they are plentiful everywhere, and I noticed them carrying sticks into one of the turpentine shrubs at the back. Of all the singers in the Australian bush they and the butcher birds, the worry of my life, are decidedly the finest and most pleasant to listen to. However, to return to our excursion. It is strange how one learns to look for and to find birds' nests; anyone interested in Nature seems to possess the gift to put one's hand on them as it were.

Leaving this bird sanctuary we travelled five or six miles back towards Sydney to a flat part of the country where all bird-life seems to have vanished. I remember this place to be an ideal one for hare shooting, one could always make sure of half-a-dozen in a morning. That day we never saw one. The unfortunate drought which has passed over this lovely land last year has left its awful evidence, even in so close a proximity to Sydney. Every few yards one would come across the bones or the carcass of a sheep. They looked as having died but a day ago, the fleece being held up by the ribs which still remained in their natural position. It seems strange that not even the skins were collected for they were heavy with

wool. We also noticed lying close together two huge eagle hawks, dried and just like the sheep. A brighter scene awaited us in a little scrub a mile away, where a scarlet-breasted robin swooped past us again and again, a sure indication that his nest was not far away. We soon located it, and it was delightful to observe them in their anxiety. The cock was one of the most exquisitely coloured birds of this species I have ever seen. The chest a deep red scarlet, the forehead pure white, glistening like a soldier's helmet. They are about twice the size of a red-capped robin and their nest similar. This reminds me of an incident a good few years back but still alive in my memory. Riding leisurely on a hot afternoon through the bush of the western district of N.S.W., suddenly a magpie (piping crow), which had its nest just above in the tree under which I passed, swooped down upon me, the bill and head penetrating my hat. The pain inflicted upon my head and the horse shying prevented me from ascertaining how the magpie behaved with the cumbersome collar round his neck.

Crossing a paddock on our way to the railway siding my boy, who was a few steps ahead of me, called out to take care, and stepping swiftly aside he narrowly missed being bitten by a large black snake. This is always the danger in the bush, many narrow escapes have we had. This one was about six feet, of the thickness of a man's wrist, beautiful shining black, the belly and flanks fiery red, usual only orange. Perhaps this was its first outing this spring, enjoying a sun bath until probably trodden upon on its tail. It curled up again immediately, and watching it lying there with head erect ready for another spring the thought came to me that this snake was in the right, I in the wrong, we were the aggressors, the snake only defended itself. It had the same right to live as I have. This country or the world was not made only for one species of animal or reptile to live in, and as if deriving my contemplations the snake uncoiled and passed by us within 2-3 feet; we never moved, she watched us closely. We watched its trail for a long while till it disappeared below a fallen tree. My boy would have dearly loved to kill it; personally I coveted the lovely skin, yet live and let live! We felt happier as we talked the matter over, that of the number of living creatures at our mercy that day we never destroyed or even blighted the life of a single one.

CASSOWARIES.

By GRAHAM RENSHAW, M.D., F.R.S.E.

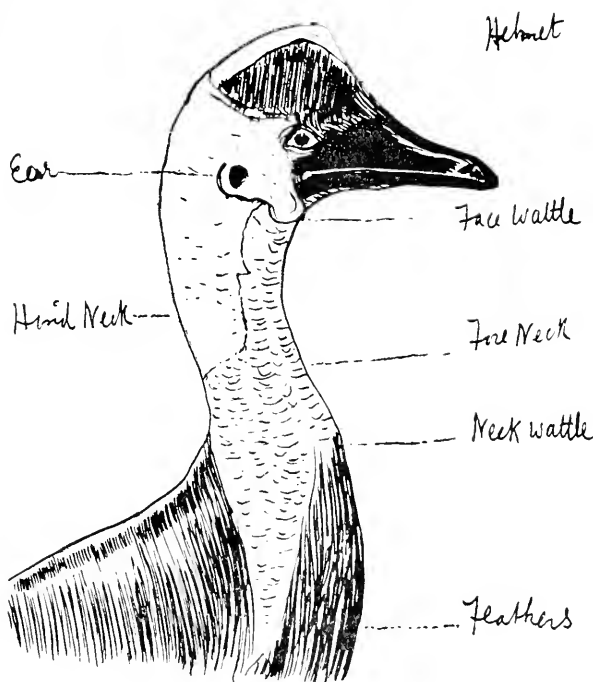
To those aviculturists who are fond of strange pets the writer cordially recommends a tame cassowary. Not only are these noble birds handsome in appearance, of marked intelligence and comparative rarity, but their nidification and breeding habits are practically unknown. Ostriches, emus, and rheas multiply by the dozen under European skies, but a successful breeder of cassowaries is rare indeed. This is unfortunate, for the bright hues and shining sable plumage of most species of *Casuarinus* render them highly interesting subjects for aviculture.

Cassowaries are hatched from eggs which in their coarsely granulated surface much resemble those of emus; but cassowary eggs are lighter in colour, being first of a pale green tint, becoming bluish and finally greyish on exposure to light. The chicks are yellowish or rufous, and longitudinally shaped with black: as they grow older they become entirely yellowish or rufous. When about half-grown a ridge or keel appears on the head: the bare parts of the head and fore-neck are of a dull leaden hue, the hind-neck is dull red or dull yellow. With increasing age all these characters grow more pronounced. The head and neck become brilliant with gaudy tints—blue, scarlet, orange, lemon yellow or golden yellow; the keel rises above the head like a regular helmet, differing in shape according to the species; scarlet or violet wattles appear on the throat. The plumage gradually becomes suffused with black, until the rufous has been entirely replaced by sable: the change from rufous to black appearing first about the breast and neck, and passing gradually from before backwards. Some cassowaries have two wattles, others only one: a third small group has none at all.

Coincident with these structural changes there is a marked mental development. Young cassowaries are always tame, inquisitive, and good tempered. The smallest seen by the writer was about one-quarter grown, it was a funny little creature, of a rufous brown hue all over, without either helmet or wattles; it was inquisitive almost to a nuisance, and quite tame. This trait of inquisitiveness

is retained throughout life; it is amusing to see one of these great birds careering over a lawn, rushing forward with plumage bristling and neck outstretched, to examine something which has aroused its interest.

Cassowaries are playful when young, dancing and running most absurdly. Sometimes they utter a ridiculous "song" composed



WATTLED CASSOWARY.

Showing arrangements of tracts of bare skin,

of a few grunting notes. Curiosity is also indicated by croaking and grunting. Unfortunately most adult cassowaries are spiteful and quarrelsome, kicking savagely and fighting each other, and are vicious towards dogs and cats

A few of the more remarkable forms may be briefly mentioned. In the two-wattled group, the Ceram cassowary (*Casuarus casuarinus*) has been the longest known, having been discovered as long ago as 1596. It is a fine handsome species, which has often been

exhibited alive in Europe. The Australian cassowary (*C. australis*) is another well-known species, of large size and striking appearance: it is remarkable for the great development of the helmet and wattles. Amongst one-wattled cassowaries the *Casuarus uniappendiculatus* is the best known; the first recorded specimen was a captive bird living at Calcutta in 1859. The single wattle is situated in the middle line of the neck, the bare skin contiguous being of a fine golden yellow colour. The first example to arrive in Europe was a young bird, exhibited in 1860 at the Amsterdam Zoological Gardens; it laid an egg which is now in the British Museum. In 1911 another specimen was living in the collection at Rotterdam. The Bennett cassowary or mooruk (*C. bennetti*) is a good example of the non-wattled group: although not so handsome as most of its congeners, the tameness and good temper of this species render it a very desirable pet.

The writer has recently studied a subadult female of the violet-necked cassowary (*C. violicollis*)—a small but local species supposed to inhabit the island of Trongan. The bird was about three-fourths grown: the bare parts of the head were bluish like an emu's, brighter at the outer canthus of the eye and immediately below the ear. The helmet appeared as a grooved keel on the summit of the cranium: posteriorly it already showed the peculiar yellowish horny hue characteristic of the species. The wattles though small were recognisable, united at their bases and of a fleshy colour: a bare tract of purple skin was seen amongst the long feathers of the neck. This bird well exhibited the position of the legs which characterises cassowaries and emus: the body seemed as if accurately balanced on the top of two supple columns. The specimen was curious and inquisitive, like all its race: it uttered croaking notes and also a choking, coughing grunt. When squatted down it still grunted, as if talking to itself, and pecked playfully at the earth on which it crouched. The croaking grunt of this species is uttered by forcibly expelling air through the almost closed beak. The violet-necked cassowary feeds in the usual manner of struthious birds—by seizing the food as with a forceps, and jerking it backwards down the throat. The present example was in fine condition and apparently acclimatised, since it would stroll unconcernedly

about its yard in a cutting east wind. The plumage (fulvous suffused with black) was very curious. It looked as if the black was being worn off, exposing a fulvous ground colour beneath: whereas it was really the fulvous and not the black which was being replaced.

Cassowaries are vegetarians, and can easily be kept on a diet of chopped bread, carrots, and dates. On the Continent at any rate they can be wintered like rheas without artificial heat. In the Berlin Zoological Gardens, however, they are kept in a superb ostrich house, built in ornate style like an Egyptian temple, and gay with mural paintings. The series at Berlin is very good: in 1903 it included *Casuarus casuarus* (Ceram) and *C. australis* (N. Queensland), with a two-wattled chick of undetermined species: also *C. uniappendiculatus* (N. W. New Guinea) and two subspecies named *occipitalis* and *aurantiacus* respectively. These two latter are very handsome forms, the bright yellow hues of the neck being set off by vivid patches of blue and bluish green. There was also a Bennett cassowary or mooruk (*C. bennetti*) and the rare Heck's cassowary (*C. hecki*), the latter being the only known example of its species. In Amsterdam the birds are merely housed in roomy sheds, with free access to outdoor yards. At Rotterdam their installation is very tasteful, consisting as it does of a pretty rustic house, with ornamental roofs and gables, and yards for exercise in front.

Although the high price and comparative rarity of all cassowaries is a great hindrance to a full study of their life history, some small success has been obtained in breeding them. For this purpose the best species is the Bennett cassowary or mooruk, which is not so savage and quarrelsome as its congeners. Thus a pair received at the London Zoological Gardens in 1858 bred several times, the male incubating the eggs. After seven weeks sitting a chick was hatched on September 4, 1862, but it was unfortunately killed by rats the following night. On June 17, 1863, another chick made its appearance, after an incubation of fifty-two days: this was weakly and only lived twelve hours. On June 20, 1864, a third chick was hatched, being joined on June 22 by a fourth, and both of these did well, being looked after by the male parent.

HUMMING BIRDS IN THEIR NATIVE HAUNTS.

By F. E. BLAAUW.

In 1911 I made a trip to South America, landing in Buenos Ayres, after having spent a day on the way at Rio de Janeiro, where I had seen wild sugar birds in the wonderful Botanical Gardens of that town.

From Buenos Ayres I took train across the pampas to Puente del Inca, high up in the Andes. From Puente del Inca I rode over 4000 metres high cumbre or pass, where "El Christo de los Andes" watches over the frontier line between the Argentine Republic and Chile, and having descended on the Chilian side I retook the train where it leaves the tunnel at Carácolés, going on in it until it reached Santiago, the capital of Chile.

In Santiago there is in the middle of the town a rock or small mountain, which has been planted as a public garden and is called the Santa Lucia. On the Santa Lucia I was destined to make the acquaintance of the old-gold-capped humming-bird (*Eustephanus galeritus*.)

The Santa Lucia is at one end of the wide central boulevard or "Avenida" which traverses the town, and from where one has occasional glimpses of the snowclad Andes. Facing the Avenida gorgeous stairways of cut stone lead up to the Santa Lucia, but in other places little winding stairs cut in the living rock and overhung by luxurious vegetation give a more private access to its heights.

One morning, during my stay at Santiago, I took one of these little paths, and at about half way, following a stone balustrade, the stairs formed an angle. In that angle a thin stream of water splashed into a shallow stone basin, whilst Eucalyptus and Cypress trees were growing near. The stone balustrade was overgrown with scarlet geraniums and some fuchsias formed the underwood. As I was leaning over the balustrade looking at the flowers I suddenly heard a shrill scream, and behold in front of me hovered in mid-air not four feet away from me an old-gold-capped green humming-bird. It remained in the air for a while, then suddenly dropped into the shallow water of the basin and began to splash to its heart's content,

all the time playing with the gorgeous old-gold-coloured feathers of its head. And as it was washing I heard another scream and a second humming-bird hovered in the air over the basin. And as the first one saw this it stopped washing and darted up into the air and furiously attacked the intruder; whilst they were fighting the golden head feathers were in constant play, the yellowish spots near the eyes seeming to sparkle from excess of colour.

And now another bird of the same kind appeared and began to splash in the basin, and from all sides they were coming and there was great warfare and a great washing; sometimes as many as seven were all bathing, whilst above the basin the little warriors fought their battle, to interrupt it occasionally by suddenly dropping into the water.

It was all not four feet from my face and it was a sight never to be forgotten, and I thought that if I should see nothing else that might interest me in Chile this sight would have been worth coming for over land and sea all those weary miles. And after they had all washed to their hearts' content they one by one darted into the air and disappeared. But they were not far away, for they sat in the Eucalyptus and Cypress trees and dried their feathers, so that all the beauty which had left them came back to them. And after this they one by one uttered a sharp shriek and were gone.

I continued my way to the top of the Santa Lucia and admired the view, but not all the glories of the snow-clad Andes could efface the delightful sight of the home-life of the old-gold-capped humming-bird.

From Santiago I took train to travel to the south and, stopping at a small place called Angol, I had a twelve hours' ride to visit woods of *Auracaria imbricata*, which exist to the west of that place. During this ride I constantly met humming birds of the same species which I saw at Santiago, in fact I met no other species during the whole of my trip to the south (March, April, May, 1911).

The birds were apparently very fond of the wild fuchsias which flowered profusely and often grew in big bushes in the forest. They also visited the scarlet flowers of a parasitic plant, not unlike our mistletoe which was often seen on the branches of the forest

trees. The birds would take very little notice of my presence, would hover before the flowers, disappear like a flash and reappear as suddenly.

More to the south, on my way to the Nakuel Huapi lake, crossing the Cordilleras again, I fell in constantly with humming-birds of the same species. Thus for instance they were quite common on the fuchsias near the torrent behind Peulla on the lake Todos los Santos.

In the splendid mixed forest vegetation between Puerto Montt and Puerto Varas I again met the same bird and, later on, one day taking a walk along the rocks which border the sea near Corral I was surprised to see these birds as active as ever during an icy cold windy evening amongst the flowering bushes.

In North Western Tierra del Fuego, where there was not much vegetation of a kind to attract humming-birds, I did not meet any, nor do I remember having seen them along the Smith Channel.

A little south of Queilen, on the east coast of Chilaé, they were very conspicuous near the big fuchsia bushes which grew there near the sea-shore. It being the beginning of winter, the weather at the time was very cold.

THE AMERICAN BITTERN IN CAPTIVITY.

By INNIS DORRIEN-SMITH.

I kept an American bittern in an aviary at Tresco, Isles of Scilly, for six years, from 1903 to 1909. The bird was caught in the island of Bryher, the most westerly of these islands, and was picked up by one of the inhabitants in an exhausted condition. A strong south-east wind had been blowing here for some days, but, in spite of that, it had struggled on to land from its long journey across the Atlantic from America. No wonder it was exhausted after a flight of 3000 miles!

Knowing I had various tame birds, the man who found it sent over to let me know, thinking it must be one of my birds that had escaped, and soon it arrived in a basket, having done its best to peck out the eye of the rescuer.

The difficulty was to find food for it, there being no fish to be had owing to the rough weather. We tried mealworms and snails with no effect, finally limpets off the rocks, and these it ate with joy, and then some small conger eels were caught for it at low tide, also fresh water eels in the pools, and then it began to recover its strength, and on this food and also tench, caught in the fresh-water pool, it thrived for six years, with occasional mice and rats. It became very tame after its long starvation and remained so always. Limpets were only given it when other fish were not forthcoming, as it would only eat them when there was nothing else for it. It had the most extraordinary long thin tongue, which it stuck out like a long hat pin when it was hungry, and also made a strange croaking noise, which seemed to be its only sound, and never the booming noise of the common bittern.

The American bittern is a smaller bird than the common bittern and a more chocolate colour on its back, with a long dark patch on each side of its neck. It had a wonderful habit of standing as if it was stuffed, with its eyes fixed as if contemplating making a dart at one's own; indeed it did one day at the boy who fed it, but luckily without hurting him. It also had a most sedate walk, picking up its feet very carefully at each step, and, like the common bittern, had a wonderful power of elongating its neck like a telescope and then hunching its shoulders and looking as if it had no neck at all. It died the death so many birds seem to die, eating heartily but getting thinner and thinner, till at last they drop off. I was very sorry indeed to lose him as he was such a curiosity and a bird with much character. He is now stuffed and in a glass case, but he looks so natural I expect to hear his croak and see his long tongue come out asking for food.

One day he had escaped from the aviary he was kept in, the door having been somehow left unfastened, a tremendous hue and cry took place as soon as the empty aviary was discovered; the bird not being pinioned nor its feathers cut, but having been in captivity for some time it, could not fly well. My brother rushed for a gun, but I was determined to catch it alive somehow, and as it attempted to rise at the edge of the fresh water pool I just

managed to get a landing net over its head before it got out of reach and took it safely back to its old home.

I found they had an American bittern at the Zoological Gardens, which oddly enough had been caught about the same time, but a long way from here, down near the Azores. It was caught I understand on a passing steamer. Possibly it left America when mine did, as it was strange they should have appeared so far from their home in a westerly direction about the same time.

OUR WINTER BREAKFAST GUESTS.

By KATHARINE CURREY.

After enjoying the society during last winter of our friendly pair of great tits, who came regularly every morning to the window for monkey-nuts, as the spring advanced their visits became less regular, till, as spring gave place to summer, neither came. With the change of seasons of course their dietary changed, and the garden furnished sufficient variety of delicacies for the greatest of avian epicures. The old monkey-nuts were quite a thing of the past. Sometimes in the daytime the tit called at the window, but when a nut was laid out he sniffed at it, called again and was gone : the garden was soon full of tits. One day in summer one of them appeared at the window bedraggled and worn and came for nuts, On the Ilex branch opposite sat a most beautiful young tit in grand plumage, who was evidently being introduced to the larders. The parent bird carried off the nut laid out on the window-sill and the young one flew after him or her, I do not know the pair of great tits apart. The young one was now often brought to the window and waited for nuts, but I never saw him take one. One day I strewed some bread on the window-sill for them ; they came, called, peered at the bread, called again, and finally darted off uttering a loud cry, probably of disgust.

It remains to be seen as harder weather sets in, whether our little breakfast guests will resume their visits. One curious fact in connection with them is worth mentioning : a hen sparrow used to haunt our little pair, dodging their 'footsteps' and pushing her

way in to get the nuts first. Then a cock sparrow appeared and asserted himself to the obvious annoyance of the tits. If they appeared on the Ilex bough the sparrows would be on a branch above; sometimes the sparrows would arrive first, or the hen alone (she was the most persistent) and became bolder and bolder. Then one morning the hen sparrow fluttered at the window in imitation of the tit, and having once done so she perpetually repeated the performance till the tits were fairly driven off the field for a time, but as the wretched poachers got nothing, and after a time left off coming, the tits returned. The sparrow is a consummate actor, and it would be hard to find a more *vulgar* bird, no amount of snubbing ever has any effect on him.

NOTES.

The Lesson's amazon (*Chrysotis lilacina*) which Mr. Astley has, is an extremely gentle bird, but beyond uttering a low chuckling laugh, never makes any other sound. Amazons usually scream more or less at times; whether all Lesson's amazons are equally quiet, one doesn't know. This particular bird delights in coming out and in sitting on a knee or a shoulder, and will nibble gentle at his owner's ears until its head is scratched,

This bird was brought by Mr. Goodfellow from Ecuador in Mr. Brook's collection. As yet it seems to have but poor powers of mimicry. The cleverest species of amazon is perhaps Levaillant's, the double-fronted, which often learns to sing songs, etc.

Mr. Astley has one in Italy which will sing parts of Italian operas in a soprano voice, ending in high notes, quite à la Melba! The bird really improvises, and also sings a well-known Italian song 'Canta Carmel,' most beautifully, and does it when told to.

The imitation of an Italian child falling down, and bursting into tearful screams, calling for its mother, is wonderful; the sobs gradually dying down as the child finds comforts. Amazon parrots do not as a rule enunciate words so clearly as grey parrots, but at singing and crying, etc., they are perhaps more adept.

During the hard and continuous frosts in November, when there were as much as 17 degrees at the very least, cordon bleus and African fire-finches (common) seemed perfectly happy in Mr. Astley's outdoor aviaries, although of course they are in a warmed shelter, with the windows open however, of a *night*. But as soon as it is light they are flying about in the open, and bathe later on in icy-cold water. And a pair of violet-eared waxbills is equally well-to-do.

* * * *

When the birds do become acclimatized, they are far better out, than in.

A Cape robin-chat (*Cossypha caffra*) sings most sweetly on winter mornings, when one feels anything but song-like oneself! And pink-crested touracos look none the worse either. They bathe in pools from which the ice has just been removed! and seem to feel the cold less than the American blue-birds.

* * * *

One day in December, when a stiff north-westerly wind was blowing, and the sun shining really brightly for the time of year, Mr. Astley, busily planting box-bushes in his aviaries, attracted the curiosity of six Queen Alexandra parrakeets, three male hooded (golden-shouldered), two Barrabands, and a pair of King parrots, all of which were running about on the lawn close to him; a galaxy of colour well worth seeing. Rose-pink, mauve blue and bright yellow-green on the 'Queen Alexandras,' vivid verdigris blue-green and daffodil-yellow on the hooded parrakeets, intense scarlet and rich green on the King, and the male Barraband with his resplendent green body, and golden-yellow throat edged with a scarlet band. And all in the pink of condition,

* * * *

On a bare tree, close by, in the larger aviary in which the owner was at work, sat a red cardinal, as red as red could be, and just behind him, so that the two patches of colour touched each other, was a male bluebird.



REVIEW.

VIGOUR AND HEREDITY.*

In commenting upon this extremely interesting book, we can only touch upon certain points and theories which are especially connected with aviculture, although probably many of our members will peruse the chapters dealing with mammals with equal zest. The theory that has in part brought Mr. Bonhote's book into being is, having regard to birds, that their song, their colouring, their fertility in reproduction, etc. is due to "vigour," and that fluctuations of this inward force are caused by environment, of which the main factors are temperature, humidity, and food. The writer claims that the general colouration of mammals and birds throughout the world is governed by these factors.

In this one cannot altogether agree. Surely changes in colouration in summer and winter are greatly due to outward surroundings for causes of concealment. Is the Snowy owl or the Iceland falcon less vigorous than the raven, and do not the two former assume white to conceal themselves from their prey, which, as in the case of the ptarmigan or the hare, also happens in order to be less visible to the enemy; whilst the raven, a carrion-feeder and not preyed upon, finds no need to change his black coat. The British kingfisher, although finding his food with difficulty in a hard winter, has not yet become less tropical in colouring, although for many generations his kind would frequently suffer more privations than let us say, the common sparrow, and therefore decline in vigour. And is colouring "largely an index of vigour," and not more chiefly for protection from enemies and for asthetic objects? We can understand that through loss of vigour there follows a loss of colouring, but we feel that the colouring, although the result of vigour, has FOR ITS FINAL OBJECT something beyond that.

We take as examples the females of pheasants and ducks, whose colouring closely resembles the surroundings when on their nests; and the gorgeous colouring of the males, as in the golden

* *Vigour and Heredity*, by J. LEWIS BONHOTE, M.A., F.L.S., F.Z.S., with coloured and uncoloured plates, and diagrams in text, price 10/6.

London. WEST, NEWMAN & Co., 54, Hatton Garden. 1915.

pheasant, the peacock, the Mandarin duck and so on, which beauty is so evidently used as an attraction to the females.

Mr. Bonhote says: "More heat, better and more abundant food, more time between the periodic breeding season and the cold of winter, or the gentle advent of spring; all these are causes which may and do affect the 'vigour' of the individual, and it is 'vigour' which we are suggesting as the main factor by which colour is influenced, and not the direct act of environment." Yet there seems no rule to this theory, for the European male bullfinch in a wild state, and we quite realize that a decline in brilliancy of the red breast in captivity is due to a lack of vigour, is just as bright in colouring in winter as in spring, whilst the common sparrow, and never was there a more vigorous bird, remains what we see it. Is the bullfinch more full of "vigour" than the linnet, that the former keeps his brilliant colour throughout the year, whilst the latter does it in the springtime? All this is puzzling. If the duller colouring of female birds in many species is due to the fact that their "vigour" is used up in the cares and strain of maternity, why do we find that in the case of birds nesting in holes of trees and banks, where they are entirely concealed from sight, the females are often quite as brilliant as the males? for instance, kingfishers, and some of the parrots and bee-eaters, titmice, nuthatches, etc. Incidentally, why, and perhaps Mr. Bonhote himself would very kindly suggest an explanation, why does the pigment which produces red, fade so much more easily in captivity than green or blue, etc.? as in the case of the red cardinal, red sunbird, the linnet, the sepoj finch. Yet the golden pheasant's breast retains its brilliancy. Some of our members might make more of a study of these facts. As Mr. Bonhote says: "The keynote of the fanciers' method is "individuality." . . . "To be able to draw any deductions or formulate any hypothesis from the study of individuals entails the making of numerous notes and observations over a considerable period of time; and is work which should be undoubtedly done by zoological gardens. . . . We are generally told the number of visitors, the amount of money received (and so on). We are *not* told the sexes of the animals bred, the period of gestation or incubation, any peculiar mating or nesting habits, etc., etc."

The Avicultural Society has to a certain extent striven to do this in accounts of the breeding of species in members' aviaries, and we might attempt more thoroughness on these lines, for how greatly interesting it would be if we had such a detailed account of how the blue variety of the budgerigar, of which alas! so few individuals remain, came into being. No doubt, as Mr. Bonhote would ably tell us, owing to a lack of "vigour," so that the pigments of blue and yellow which produce green became weakened, and the yellow subsided, whilst in the case of the yellow variety of the species, the blue pigment was in abeyance.

In conclusion, we thoroughly recommend "Vigour and Heredity" to those who are interested in the subject, for the whole book gives one cause for deep thought and for increase in learning. The chapter on ducks, illustrated with three finely coloured plates of Pintail-Mallard-Spotbill hybrids, will especially appeal to those interested in the family, whilst other chapters such as "Coloration and index of vigour," "Colouration in mammals and birds" will most certainly appeal to those of our members who wish to be more scientific, that is, to know more than they already do.

H. D. A.

CORRESPONDENCE, NOTES, ETC.

THE ENGLISH WATER RAIL (*Rallus aquaticus*).

SIR,—Even in this dismal war time I am tempted to write to urge members of the Society who love British birds to make an effort to get water rails to breed in captivity. If this has been done before, I am not aware of it, and at any rate a new and detailed record of nesting would be a very interesting thing to many of us.

I have in years past had several odd water rails in captivity, and found them quite easy to keep in a medium-sized grass run with small waders. They are—like many other rails—exceedingly fond of hiding, but this does not say that if a pair could be obtained they would not breed readily.

The land rail, or cornerake, has several times nested in captivity, although it is naturally a very shy bird. I have just obtained a fine pair that have been reared by Mr. W. E. Rattigan at Stonehouse. My own experience with rearing Australian pectoral rails was not long since recorded in the magazine, and I find these birds, except when breeding, quite as shy as the English water rail.

During the breeding season, however, their conduct entirely changes and they become quite ferocious.

When I refer to such books as I have on natural history, it seems to me that there is a good deal to learn about the habits of the English water rail when nesting. Details of the period of, and habits during, incubation, and as to how incubation is shared by cock and hen, would certainly be interesting to many people, as also particulars as to the "sharming" and "purring" noises.

The main difficulty appears to be to get a pair of birds at one time. Personally, I have not many sporting friends, but several of them have promised to let me have a water rail if they can get hold of one. In this district they are by no means common; indeed, I have only seen one in my life, but in some districts they appear to be fairly plentiful, and I am told that in winter or very early spring, when they are flooded out of their usual haunts and run up dykes, they can be caught with a soft-mouthed retriever.

If I get hold of an odd bird I shall be delighted to give it to any other member of the Society to make a pair, if there is any reasonable prospect of the birds having a run in which they would be likely to nest. A fair-sized run, with some big grass tussocks or other cover, would, I think, be essential, though the water supply might be quite small. The sides of the run near the ground should be of small mesh wire, to prevent the chicks getting through. I had trouble several times with my Australian rails owing to their squeezing through the wire and not being able to get back.

The effort of any one individual to bring about such an interesting result as rearing young water rails would not, as I have above indicated, be likely to succeed unless a good many members of the Society co-operated in attempts to get nesting birds for a subject of common interest, and I hope the publicity which you will give this letter by insertion in the Magazine will ensure something being done.

C. BARNBY SMITH.

Woodlands, Retford.

PHOTOGRAPHING A SATIN BOWER-BIRD.

In "The Emu" of July, 1915, a most excellent photograph is reproduced of a male Satin bower bird with a twig in its bill, in front of its bower, and Mr. James Ramsay writes;—

"As regards difficulty, either the *Podargus* or the Shrike-tit gave me more trouble, but the Satin-bird easily eclipsed these as a test for patience; he was indeed a wily old bird. The first day I lay under some straggling grape-vines from 10 o'clock till 3.30, when a heavy shower put an end to any hope of securing an exposure. The second day I was ready earlier, and had everything in readiness by 9 o'clock, and never left my hiding-place till 3.45, when I exposed one plate just as the rain came down. The shutter, however, which had been set in the bright sunlight, proved too fast for the greatly reduced light, and I was not able to develop a good picture. During almost all the second day the old Satin-

bird was in sight, either in the casuarinas by the creek or actually in the old mulberry tree above the bower, and I dare not either alter the shutter or rise and stretch my legs. Luckily, I had gathered a supply of mulberries and had a pocketful of biscuits, so I managed to put in the day with only the inconvenience of a little stiffness. The last day (on which I stayed simply as a last hope of securing a picture) I made more of a shelter for myself, both to guard against the sun and to hide me from all sides, for inquisitive rosellas (which came to feed on the dead thistles round the bower) and leatherheads and numbers of *Strepera* used to peer at me from a distance of a few feet, and I fancied that they somehow alarmed the Satin-bird, for he used to investigate on all sides before coming into the mulberry tree, although the two females with him were far more trusting; but I never saw them take the slightest interest in the bower. There were many opportunities on the third day, but I only managed to expose three plates, as, after each exposure, I had to let the bird leave the bower, naturally, and it would be hours sometimes before he again got in focus. My great regret was that I had no cinematograph, as there were times when the bird was playing round the bower, rearranging feathers, etc., for as long as five minutes at a stretch."

AN AGED DIAMOND DOVE.

This morning I discovered to my disgust that my sole remaining Diamond dove had disappeared from my birdroom: it must have got through a hole in the wire-netting close to the floor, made its way into the conservatory and escaped through the top light which has been left open on one or two warm nights lately. Speaking of this bird in the Magazine for October 1913, I say—"Male still living after over nine years," but I evidently confounded it with a bird purchased in 1903 which (as recorded in my "Foreign Birds") died in 1907, so that I was left with only the male of my original pair of more vigorous birds purchased in 1896; it is this bird which has now got away after being nineteen years in my possession, a pretty good record for even so long-lived a bird as a dove: I expect it is dead now from want of food and cold.

12th Dec., 1915.

A. G. BUTLER.

TWO CIVILIZED SANDHILL CRANES.

From "Bird-Lore" we cull the following account (by Minna Moore Willson):—"Betty and Dixie are two pet Sandhill cranes that have lived happily on the large lawn of our home at Kissimmee, Florida, even since they were downy youngsters fresh from the Everglades.

Economically they have few rivals, for, with their never-ending appetites and great capacity for food, they dig from the first streak of dawn to the falling of the evening shadows. Worms, bugs, larvæ, and grasshoppers, all disappear rapidly down their long necks. They will eat readily from the hand.

Our pets, now being advanced somewhat in the scale of civilization, have

learned to intersperse their natural food with wheat, corn, and scraps from the table. How much insect-food they would consume if left entirely to their own devices it is difficult to say. When the wheat-can hanging from a wire on the back verandah is empty, a message is quickly telephoned to the housekeeper, by a petulant ringing of the can, which unmistakably means 'empty dinner-pail.'

During the tourist-season, Betty and Dixie are much in the lime-light. They have developed a certain amount of vanity, and seem to understand the exclamations of praise and admiration given by visitors, who frequently stop at the fence to admire them.

The use of kodaks they look upon as quite proper, and stand with a dignity that is very gratifying to the photographer. They have learned, at the behest of their master, to carol a greeting, as many times as it is requested; and their dancing is no longer the hesitation nor the turkey-trot, but the real, rioting, Kissimmee prairie-dance, bowing and running with widely outstretched wings, circling, jumping, and then darting back to their master for new orders and a piece of moss. This they throw into the air and catch, and then dance about again with great animation.

When these performances begin, Efan, the ambitious collie, hurries for his ball and bat, and the scene becomes most interesting, with the two cranes dancing and jumping, apparently vying with the dog for honours and applause. There is a grey squirrel that takes great pleasure in teasing the cranes. He chatters to them in mischievous delight, and runs down the trunk of the tree, where Betty and Dixie stand playing hide-and-seek. He taunts them by leaving the tree and darting across the ground to a palm, where he makes the fronds rattle and shake, then back again to his quarters in the hickory.

Last winter we had as Christmas guests six Seminole Indians from the Everglades. In the party were Martha Tiger, a very old squaw, and her two grandchildren, youngest descendants of the heroic old chieftan, Teliahassee. Wilson Tiger and Lewis Tucker were also here, escorted by Chief Billy Bowlegs, who acted as friendly guide and interpreter.

The cranes insisted upon being with this forest group, and, on several occasions, when the library was full of visitors who had come to see and meet the Seminoles, Betty and Dixie showed a determination to be in the room also. As quickly as they were driven out, back they would come. Did they recognize in these wilderness people a comradeship for their native haunts? Did they long to be back in the Everglade country?

The march of civilization has made sad havoc with the large numbers of Sandhill cranes that once belonged to the Florida prairies. They have been systematically shot for food and for so-called sport, and only occasionally are these beautiful and sensible birds seen now in the more thickly settled districts; and unless better protection is given, these cranes are doomed to speedy extermination in Florida.



THE GOLDFINCH
(*Carduelis elegans*).

Photo by J. H. Symonds

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THE EUROPEAN GOLDFINCH.

Carduelis elegans.

By Dr. A. G. BUTLER.

Our editor has asked me to write an article on this bird and therefore I have consented, although I am afraid that I can say little if anything respecting it which has not already been published elsewhere. I regard it as the most beautiful of our English finches, and consequently (since I first began to keep living birds) I have rarely, if ever, been without at least a pair of the species.

The geographical distribution of the Goldfinch and its coloration have been so often described that there is no necessity to repeat them here, but it may perhaps be useful to state once more the characters which distinguish the sexes:—the male is slightly larger than the female, slimmer in outline, usually with a straighter beak; he appears to stand more erect and is certainly more alert than the female. In colouring he is altogether brighter, the crimson of the face more intense and extended slightly farther back, the white areas much purer (less stained with brown), the rump always more or less white (a character especially pronounced in the larger Siberian race), in the female there is sometimes a trace of white on the rump, but in some examples it is wholly lacking; the rufous-brown patches on the breast of the male are larger and more richly coloured and the yellow belt across the wing decidedly broader, of a deeper colour and much more regular in outline; in the female the division on the eighth (formerly described as the third) primary

frequently, if not invariably, distinctly shorter than the others;* the black colouring of the wing and especially at the bend, upon which bird-catchers usually rely in distinguishing the sexes, sometimes leads experts astray when dealing with young birds (grey-pates); but, in fully adult birds, the bend of the wing in the male is either intense black or glossed with green; whereas in the female it is rusty black: my little book "How to sex Cage-Birds" with coloured plate facing p. 38 and the block illustrating the wings on p. 40 clearly shows these distinctions.

In disposition the Goldfinch is a restless bird and he delights in picking things to pieces; if he cannot utilize this impulse in extracting the seeds of thistle, teasle, sow-thistle, groundsel or dandelion, it is well to provide him with millet sprays and flowering grasses, which are an equal attraction to him; otherwise he will occupy his time in picking off the buds and leaves from shrubs or trees growing in his aviary. I think it is chiefly the lack of such means of employing his restlessness which induces a cock goldfinch when confined in a small breeding-cage to interfere with its wife's nest and pierce her eggs. In a fair-sized flight-cage, where groundsel could be twisted in the wires at a distance of only about a foot from the nest, I did not find that the nest or eggs were interfered with.

It is not a spiteful bird, and although it is selfish enough when feeding to attempt to drive away all others from the food-pan by springing at them with open beak, fluttering wings, and the opprobrious term—"chit," it does not actually attack them, and if they resist, it flies away until the place has again become vacant.

Although less easily tamed, because not quite so confiding, as the European siskin, the goldfinch is not naturally a nervous bird; and though confinement in a small cage soon renders it very wild and timid I find that where it has plenty of space for flight it shows less fear of a human intruder into the enclosure where it lives than many other birds; indeed I discovered some years ago that whereas goldfinches purchased from a shop, which had been confined in small

* I think this is a constant character, but considerable variation in the abbreviation of the yellow streak raises a doubt as to its value without further confirmation.

cages, were wild and clung to the wirework near the roof for weeks after their liberation in an aviary, some which I turned out on the afternoon of the same day in which they had been captured settled down quietly at once and showed not the slightest fear of me when I passed underneath them.

The wildest goldfinch I ever possessed was one which I purchased out of pity from a birdcatcher. He kept it in a little cage measuring about three inches by six and six or seven inches in height, with one perch only, and used it as a brace-bird when he went out with the nets. The man called it a "wonderful tame bird" and informed me that the proper way to tame a finch quickly was to swing it about in its cage and when moving from place to place always carry the cage under your arm. Poor little mite! such treatment by a frowsy red-haired man verging on fifty years of age was awful to contemplate, and if utter depression and nervous shrinking indicated tameness, most assuredly the birdcatcher's plan had been eminently successful: I never saw any creature look more scared and utterly dispirited; but when I turned it into a flight the little beggar was so frantic that I was greatly tempted to set it at liberty in the garden; yet in time it somewhat quieted down, although it never became so trustful as other members of its species which I have possessed.

The wild life generally and the character of the nest and eggs of this bird have been rendered so familiar to bird-lovers in the ever increasing number of works dealing with British birds which have been published that I can see little use in describing them here. Most of my readers know by sight the soft neat little cup-shaped nest, often placed on the lichen-covered branch of some venerable fruit-tree, or much more rarely in a hedge. The lively jerky little song of no great merit I indicated in words (written down as they were being sung) in my account of the Goldfinch in "British Birds with their Nests and Eggs" as also (of course) in the somewhat modified reprint of the Passerine portion of that work illustrated with coloured plates, entitled "Birds of Great Britain and Ireland."

Now before leaving the goldfinch I think I ought to advert to a somewhat disputed point touching its decrease in numbers in this country. It has been assumed and even positively asserted by some

ornithologists that the goldfinch has actually decreased in numbers owing to the activities of birdcatchers: of course to any reflecting person such a notion is ridiculous, for it is still as abundant as ever on the Continent, and anybody who has read with interest Gätke's remarks respecting the migration of birds in his "Heligoland" must be convinced that not all the catchers in Europe could possibly appreciably affect the numbers of the species: moreover it must not be forgotten that in the middle ages when every man, woman and child, at all seasons, by every means which ingenuity could suggest, secured birds of all kinds for the cooking-pot, so that one might marvel that any species could survive; birds were nevertheless far more numerous than at present, and the number of species represented in the British Isles was probably far greater; nor is the reason for this far to seek.*

I am not a bigoted person and have no axe of my own to grind, but I do dislike to see kind-hearted and bird-loving individuals led astray by ridiculous statements. It is undoubtedly true and greatly to be regretted that in some counties the goldfinch has become much rarer than it formerly was in spite of protective laws: but there is not the faintest shadow of doubt that the cause for the retirement of this and many other abundant species from their former haunts is the reclaiming of so-called waste land and the consequent destruction of the favourite seeds of weeds upon which they subsisted as well as suitable nesting-sites.

When I first commenced birdsnesting in Kent in 1871 it was not at all unusual to see goldfinches and sometimes come across their nests during a morning ramble; but, some years later, although then protected, one might pass a month in the country and not once catch sight of a specimen, yet I heard of them being abundant as ever in other counties.

The disappearance of the Kentish goldfinches synchronised with the cutting down of numerous large woods and plantations covering hundreds of acres, together with the grubbing up of all the rough scrub along their margins where various forms of thistle and sometimes teasle grew abundantly. All this land was ploughed up,

* An enlightening book for the student is Macpherson's "History of Fowling," 1897.

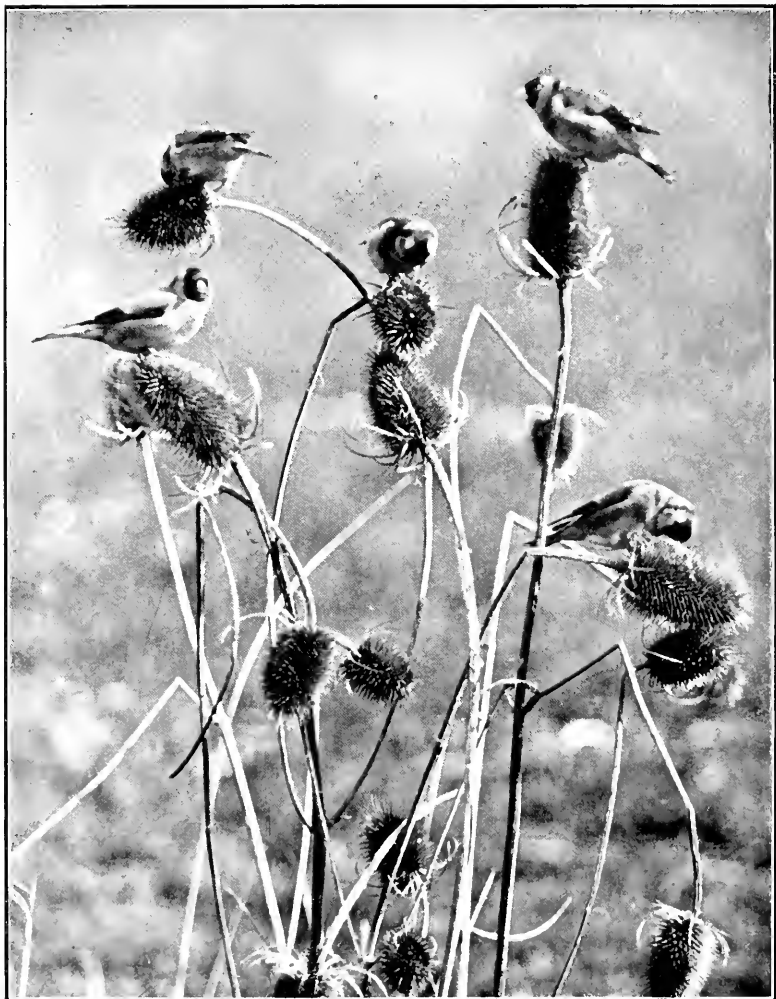


Photo. by J. H. Symonds

GOLDFINCHES ON TEAZELS.

cleared of stones and converted into hop-gardens and orchards. One landowner, whom I knew personally, levelled a hundred acres of wood in a single year and subsequently planted it with serried rows of young cherry and apple-trees with currants and gooseberries planted between to supply the market while the more profitable trees were maturing. Year after year I saw beautiful woods cut down, banks and hedgerows covered with weeds beloved of birds swept away, and it did not in the least surprise me that goldfinches no longer elected to settle there as aforetime, but strayed farther afield in search of what they needed.

It is many years now since I went birdsnesting: indeed my great object in collecting nests and eggs was to enable me to write a much needed book on the subject, illustrating not one or two but many varieties of the eggs of our commoner birds, so as to enable young naturalists to identify any eggs which they might come across, which from personal experience I had found impossible with the help of the books previously published in this country. When my object had been attained I at once gave up birdsnesting and have never resumed it: yet undoubtedly the occupation is most fascinating and instructive: it not only teaches one much about the habits of birds, but it trains the eyesight and judgment, so that as one becomes expert one knows just where to look for a nest and at once detects it when present; whereas the ordinary wayfarer, even though keen-eyed in some matters, entirely overlooks it and even fails to see it when it is pointed out to him.

We none of us wish the British avifauna to decrease; but if we are to retain many of our birds the only chance is to set aside more and more enclosures of wild and well-timbered land for sanctuaries and give them every encouragement to settle there, not only by providing numerous building-sites but abundance of the food which they most delight in. You cannot bind birds to the land by law, nor in my private opinion does the taking of a few nests make a halfpenny-worth of difference numerically to the species of any common or prolific bird, although undoubtedly in the case of rare birds, such for instance as the golden eagle, it matters a good deal.

One wonders whether the roccoli in Italy have been less worked on account of the war. I fear not, for there are always old men and boys left at home. But if the toll on the poor birds has been less, what a blessing! The roccoli are everywhere, and the goldfinches are netted in thousands, so that one wonders how they manage to keep up at all. How horrid it is, this perpetual slaughter of living things, from man downwards! Members will recall my account of an Italian roccolo, with illustrations, in the 1912 magazine (January). Two pairs of goldfinches always nested in the tall cypress trees in my garden, which overhung the lake of Como at Varenna, but I never saw the birds anywhere in the garden itself, and I imagine they resorted to the rough ground on the mountain sides at the back of the town, although, often as I walked there, the goldfinches were not to be met with.—ED.

MY PIPING CROW.

By Mrs. STAVELEY-HILL.

I bought my crow five years ago and call her "Chips"; she was then quite a young bird not full grown, was very tame and soon became devoted to me but took a violent dislike to my children and all men, flying at them and snapping her beak with a loud crack.

I fed her on a little raw or cooked meat twice a day, insects of all kinds and any scraps she cares to eat, such as cake, bread and butter, &c., and, as a great treat, a mouse (when obtainable).

I used to take her to London with me, when she always travelled in a box with a hole at the top, out of which she would stick her head, taking great interest in everything and calling out "hullo!" to the passengers. If I had the carriage to myself I let her out of the box when she would sit on the window-ledge or on my shoulder watching everything that passed. "Chips" soon learnt to say a few words and now whistles whenever I speak to her. She has a wonderfully powerful voice. I do not take her away now unless I am going to the seaside for a month or more with the family, when Chips comes too, and thoroughly enjoys a walk in a field when there are ants' nests to be found, which I dig up, Chips

standing by and devouring the eggs, but she is most particular not to allow the ants to crawl on her, drawing herself up very erect and stamping her feet if they crawl on her legs, making a queer croaking noise meanwhile.

She lives out here, quite free, flying away as far as she likes, but always returning when called, and follows me about the garden like a dog. When I am gardening she stays close beside me picking up insects, but does not care for worms unless they are small red ones. She also eats seeds and sometimes (like an owl) throws up a pellet about the size of a sparrow's egg. When this is going to happen she looks ill and stands sulking and puffed out, shutting her eyes and shaking her head.

She began to build a nest last year on the back of a chair in the conservatory where she roosts, but the nest was never properly finished. This year I noticed another nest being built on the top of the aviary so I put up a cardboard box and procured a tame jackdaw hoping they would mate, but "Chips" only drove the bird about and very much objected to being shut up in the aviary with a stranger.

"Chips" is now more devoted to me than ever, and when she sees me gives a peculiar call and likes me to stroke and kiss her (as a rule she does not like to be handled). She was delighted when I got a ladder and took some sticks up to help her build the nest which was finished, being made of sticks roughly put together and lined with dried grass, cotton, string, bits of paper, &c.

Soon afterwards she did not come down out of her nest but kept calling to me, so getting a ladder I climbed up to look, raising "Chips" off her nest and found two eggs, measuring $1\frac{1}{2}$ inches long and $3\frac{1}{4}$ inches in circumference; one is a greenish blue with faint spots and the other a greyish green with brown spots. She liked me to get up and pet her whilst on her nest, croaking and lifting herself up on one side for me to see the eggs. I fed her with tit-bits while she was sitting. I wish I could find a mate for her; she is one of the most interesting pets I have ever had.

SUNBIRDS IN THEIR NATIVE HAUNTS.

By F. E. BLAAUW.

When I landed at Capetown in the spring of 1914, which of course was autumn in South Africa, I was curious to see what one might call the South African humming-birds, which however are known under the name of sunbirds, and which Levaillant called "petits sucriers." I had not long to wait before I saw a specimen.

I stopped at the Mount Nelson Hotel, and the day after my arrival, sitting in the charming garden which surrounds it, my attention was drawn by the trembling movement of some twigs of a fine scarlet flowering hybiscus bush. The reason of the movement was soon apparent, for a little golden green, blue and scarlet bird followed the branchlets until it reached the flower and then put its long bill *sideways* between the scarlet petals, probing the centre of the flower for honey or insects. This was quite a different thing from what a Chilian, or I believe any other species of humming-bird would have done. Those would have come flying; coming from somewhere, without it being almost possible to see them come, and hovering in the air in *front* of the flower, they would have examined the contents in that position and would be gone a moment later.

My sunbird, and, I may say at once, the seven species which I watched, almost invariably acted in the way described above. Only when the structure of the bush or the flower made it impossible to follow this custom, they would hover in front of the flower like a humming-bird.

After having hopped from branchlet to branchlet and examined all the likely flowers the little bird flew away, and also in its flight showed itself quite distinct from the humming-birds, which fly like a flash so that the eye can hardly follow the movement. Never did I see a humming-bird jump from branch to branch, they *sit* or else they *fly*.

The bird in question, which I saw in the garden at Capetown, was a male *Cinnyris chalybeus*, and this species is, I am glad to say, quite common there. A couple of weeks later I was stopping a day at Caledon, also in the south of Cape Colony. The hotel in which I stayed was built against the slope of a volcanic mountain, where

plenty of old lava was lying about and where a hot spring had its source. Above the lava field a great number of protea bushes grew and, whilst I was admiring the beautiful vegetation and was listening to the sweet song of a *Totta finch*, I saw a grey bird with a long tail fly up above the bushes and accomplish a dance in which the long tail feathers played a conspicuous part. After the dance he perched on the top of a protea bush, drinking from the honey which is abundant in the big flowers, which resemble those of a phylocactus. It was a male *Promerops cafer*, and it was a delight to watch its graceful movements.

In the same place there were lots of double-banded sunbirds, which all feasted on the honey of the protea flowers, and were singing lustily. It is quite remarkable the amount of honey a single protea flower will hold. When at their best they will hold quite a tablespoonful and not counting the caffir boys they are, I was told, in great demand with the baboons.

I now mounted a kind of steep rocky wall, and after that, following the slope of the mountain, sat down near the top in a very wild-looking place full of rocks and stones, enjoying the view of the country below me. I had not been there very long when my attention was drawn by the little song of a bird which seemed to be in my immediate proximity, and looking round I saw *quite* a small bird gorgeously attired, which was sitting on a sharp piece of rock almost within reach of my hand. Close by it, was its sober-looking female, which, apparently having just bathed, was cleaning her grey feathers, sitting in an erica bush.

The little male of this species (*Anthrobaphes violacea*) is certainly one of the finest birds one can imagine. The head and mantle are of a metallic green: the throat is black; the back is brownish; the underside is of a beautiful reddish orange; and the two middle tail-feathers are lengthened considerably; the bill is long and slender. Now and then the bird stopped singing and went to join the female in the erica bushes, probing the flowers for honey or insects. Occasionally, having had enough of singing and feeding, the male would leave its rock and fly straight up to perform an aerial dance, returning afterwards to the female. And thus, without taking the slightest notice of my presence, they followed their mode of life

whilst I sat still and admired. When, to my regret, I had to go home and leave them, the little birds followed me for a while and then disappeared. This is the sunbird of the rocks.

In Port Elizabeth I made the acquaintance of a fourth species of sunbird (*Cinnyris amethystinus*). This bird is larger than either *Cinnyris chalybeus* or *Anthrobaphes violacea*, and of a heavier build. It is a living gem, like the birds described; it is of a shining velvety black with a metallic green cap and a metallic purple throat. It flies in a straight line, uttering sharp shrieks, reminding one of our kingfisher at home when he flies.

In Port Elizabeth I saw this bird for the first time in a villa garden, and, later on, I saw several in a park at Mossel Bay. This park is against the slope of a mountain. Part of it has been planted but the greater part contains its natural vegetation, and it is full of interesting birds. In this last part the protea bushes were quite numerous and full of flowers, and, at the time of my visit, there was a nice gathering of sunbirds. The double-banded one was there, of course, and then, from different directions, black ones would come to drink from the sugar-water of the flowers, sitting on the edge as on a cup. Some were in colour and some were partly grey. Also Malachite sunbirds (*Nectarinia famosa*) would come to feast. This is a largish bird in a wonderful shining green and black dress, with two *very* much lengthened tail-feathers. I met with this same bird near Oudhshorra, the great ostrich-breeding place, and one could find it amongst the flowering bushes along the roads. Near the Congo Caves in the Zwarte bergen in this same district the Malachite sunbird was quite a common sight.

Along the road grew tall meagre-looking slender bushes with long pale, yellow pipe flowers, so-called "wild tobacco trees." In front of the flowers of these bushes the birds would hover like a hummingbird, the slender stems not allowing them to perch on them.

A sixth species of sunbird I met in Natal around Durban. The town is surrounded by low thick woods, which grow against the mountain side, and Mr. Casey, the director of the Durban Zoological Gardens, was my kind guide, to find me open spaces where it was likely to meet with birds. In those open spaces of the wood I often saw a metallic green sunbird (*Anathrephes collaris*)

with yellowish underside, and generally there were several specimens together.

In that same wood I met numerous examples of the curious black-brown thick-billed finch (*Amblyospiza albifrons*), also little families of *Colius striatus*, and, occasionally, sitting in a conspicuous place, a white and black *Lanius collaris*.

But I am straying away from the sunbirds, and if I should begin to tell about all the interesting birds which I saw in S. Africa the editor would soon call me to order ; * and about the sunbirds in their native country I have told about all my experiences. About tame specimens of *Cinnyris chalybeus*, which I brought home, I will only add that they are the most charming pets one can imagine ; I ought to say, *were*, as alas ! they have died, generally very suddenly one day full of life and full of song, the next sitting fluffy and showing the yellow side tufts, and dead during the evening or the night following.

Gooilust, Sept. 19th, 1915.

P.S.—I have not made a distinction between the greater and lesser double-banded sunbird (*Cinnyris afer* and *chalybeus*). Those I saw at Capetown certainly belonged to the lesser species, as *Cinnyris afer* does not occur there. As in other places where I saw double-banded sunbirds, both forms may occur, I wish to say that I am unable to say positively which form was seen.

WONDERS OF THE BIRDS' NESTS.

By FELIX J. KOCH.

“ Don't know what to do with yourself some splendid late autumn or winter afternoon, when the sun is shining brightly in at the window, calling for a ramble ? ” Then, why not go out and study birds' nests ?

Birds' nests in winter, with the trees banked with ice ! Yes, indeed, and for many reasons, To begin with, you can find birds' nests from afar in the winter-time, when the leaves are off tree and

*On the contrary, we hope very much that we may have many more articles.—ED.

shrub, as you never can in the summer, for Nature has taught the birds the necessity of concealing their nests, and, rest assured, they learned their lesson well. Then again, where a nest is within reach, it may be taken out or down, examined, and this without harm to the little ones or even the frightening away of the mother-bird thereafter.

Infinite are the varieties of the nests of the birds of this country. Swinging away out at the end of some limb, the oriole builds her nest. You could'nt climb out there to get it if you tried, nor could you reach it from below, for Madam Oriole knows many of the cat tribe would soon get her fledgelings, if *you* could. The only way to reach this deserted nest is to do as the orchid-hunters do, climb up above and then drop a noose, manœuvering until you catch the end of that bough and pull it off.

Nuttall, the famous naturalist, has given much space to these oriole's nests in his books, interesting because hardly any of us but have seen the little pouch swinging, back and forth and forth and back from the very top of some deserted limb, in the winter.

It is a pendulous, cylindric pouch, of five to seven inches in depth," he tells us, "usually suspended from near the extremities of the high, drooping branches of the trees, such as the elm, the pear or apple-tree, wild cherry, weeping willow, tulip-tree, or button-wood. It is begun by firmly fastening natural strings of the flax, of the swamp weed or the swamp holly-hock, or stout artificial threads, round two or more forked twigs, corresponding to the intended width and depth of the nest. With the same materials, willow-down or any incidental ravellings, strings, thread, sewing-silk, tow, or wool that may be lying near the neighbouring houses or round the rafts of trees, they interweave and fabricate a coarse sort of cloth into the form intended; toward the bottom of which they place the real nest, made chiefly of lint, wiry grass, horse and cow-hair; lining the interior with a mixture of slender strips of smooth vine-bark, and rarely, with a few feathers, the whole being of a considerable thickness and more or less attached to the external pouch,

"Over the top, the leaves, as they grow out, form a verdant and agreeable canopy, defending the young from the sun and rain.

There is sometimes a considerable difference in the manufacture of these nests, as well as in the materials which enter into their composition. Both sexes seem to be equally adept at this kind of labour and I have seen the female alone perform the whole without any assistance, and the male also complete this laborious task nearly without the aid of his consort, who, however, is, in general, the principal worker. I have observed a nest made wholly of tow, which was laid out for the convenience of a male bird, who, with this aid, completed his labour in a very short time and frequently sang, in a very ludicrous manner, while his mouth was loaded with a mass larger than his head!"

Where the birds will build, however, and what they will use embraces a catalogue of almost everything under the sun. We are all of us familiar in the United States with Alice Cary's charming poem, "The Nest in the Pocket," long included in all public-school readers. You remember, of course, how a farmer, coming to the barn in the spring to resurrect an old coat left there over the winter, found that a bird had made its nest in the pocket. So he let the coat hang and the birds reared their brood, then he took possession again of his garment. The barn where this actually occurred stands near College Hill in Southern Ohio.

In this same State, near the village of Cheviot, we ourselves chanced on a curious nest at one time, around which a clever story might be written. 'Jack Roosa was advised by mother to study his spelling,' teacher would be quite apt to hold a "test" to-day. But Jack was in a hurry to meet Martha at the cross-road and carry her lunch-basket and books to school, so he neglected to give the time to the "boning." The test came and Jack failed miserably. When the papers came back he was so ashamed he tossed his in a crumpled ball in the bushes. There a meadow-lark found it and worked it into a nest, which we have kept to this day. To suit the story, however, suppose that bird had built her nest where Mrs. Roosa had found it, seen the paper as well—and well, you can imagine for yourselves the conclusion!

As stated, there isn't a place where birds will not build. Our friend Bob White, bob-o-link, reed-bird, rice-bird, quail, as he is known in the different places he comes to, makes his nest on the

earth itself almost, and you'll find these nests again and again as you tramp the fields in the late autumn or before the snow has come. These quail are polygamous and one bob-o-link * may be master of a number of these ground-nests, each with its twelve to eighteen eggs, in proper season.

Our friend the magpie—dear to all for his ability to talk, plainer even than the parrot does—will build his nest in a high tree or lofty hedge if he can. This nest is formed on the outside of sharp, thorny sticks, within of fibrous roots and dry grass. The top is covered, with an entrance at the side, and the eggs are six or seven.

Like many of the crow family, Goodrich discovered "the magpie has a strange desire to pilfer and secrete small, shining objects, especially pieces of money," if the farmer for a moment lay these down within reach. The affecting story of the magpie and the maid, in which the latter was charged with theft, while the magpie was the culprit, is founded on fact, and is familiar to all: and these brilliant objects picked up here and there, are usually to be found in its nest.

Birds, great and small, each take all the pride in their nests that the most aristocratic American may find in trimming his home, and the nests invariably reflect the habits and needs of the birds.

Tinest perhaps of all the nests you may find on your winter's ramble are those of the humming-bird, often a little sack of thistle-down and milk-weed puff, edged with dainty lichen.

Interesting, by way of contrast to these, is a nest that the tourist is shown ever so often, on the great ostrich-farm near Pasadena in California. It is the nest of the largest bird in the world and interesting are the facts connected with it. The African ostrich it seems is polygamous, the male usually associating with from two to six females. The hens all lay their eggs together—ten to twelve apiece in one nest—this merely a shallow cavity scraped in the ground, of such dimensions as to be conveniently covered by one of the gigantic birds, in incubation. An ingenious device is employed by Nature to save space here and give at the same time to all the eggs their due share of warmth. Each of the eggs is made to stand with the narrow end on the bottom of the

* We were not aware that the Bob-white quail is called bob-o-link. The latter is the name for a well-known bunting-like bird in the U.S.A.—ED.

nest and the broad end upward, and the earth which has been scraped out to form the cavity is employed to confine the outer circle and keep the whole in proper position. The hens relieve each other in the task of sitting during the day and the male takes his turn during the night, when, in the wild state, his superior strength is required to protect the eggs or the newly-fledged young from the jackals, tiger-cats, and other enemies. Some of these animals, informant advises, are not unfrequently found lying dead near the nest, destroyed by a stroke from the foot of this powerful bird. The eggs weigh about three pounds and, being quite a delicacy, are served now and then at the great hotels in Pasadena.

SOME FIREFINCHES AND OTHER GAMBIAN BIRDS.

By Dr. E. HOPKINSON.

(Continued from Vol. VII., No. 2, p. 61.

THE VINACEOUS FIREFINCH (*Lagonosticta vinacea*).

This is another of the more uncommon West African 'wax-bills,' and a particularly attractive one. In Gambia it is distinctly the rarest of our firefinches, and like the spotted firefinch (but to a greater degree) very local and restricted in its distribution. In my own Province I think I know every place where it is to be found, and they are but few; elsewhere throughout the Protectorate, except near the coast, I have met with it in various places, but nowhere in any numbers and always among or in the immediate neighbourhood of bamboos; sites, which in this country are practically always the ironstone ridges and the valleys in between, as our bamboos are of the upland variety. When thinking then of Gambian bamboos, one must not imagine a mass of dense water-side growth, such as one usually associates with the word 'bamboo,' and which would be correct for the larger water-loving plant of the East and elsewhere, but on the other hand, always bear in mind some of the driest possible places in this, the driest part (except the Sahara itself) in what is, I suppose, the driest of all the continents. Such places are low rocky ridges covered with a shallow and irregular amount of soil, which

supports a growth of bamboos interspersed in places with low straggling thorns, bone-dry during the dry season when the thin grass they support is burnt off, and only wet, even during the rainy season, while the rain is actually falling. It is in such situations, and in these alone that one will find Vinaceous firefinches, searching the ground for seeds or flitting among the bare bushes, rarely more than half a dozen or so together, sometimes by themselves, but generally associated with common firefinches, cordon bleus and grey-headed sparrows.

Although from habit I speak of these birds as 'firefinches,' they are much more 'waxbills' both in looks and demeanour, and by recent authorities (e.g. Shelley in his *Birds of Africa* and Bowdler Sharpe in the *British Museum Hand-List*) are placed with them in the genus *Estrilda* (as *E. vinacea*) near the Lavender finches, which are the waxbills they most resemble in all their ways, and which also were formerly included in the genus *Lagonosticta*.

The exact colour of this bird is rather difficult to define. I do not know that 'vinaceous' or 'vinous' are particularly good or sufficiently accurate epithets,—the thought of a wine of this bird's shade of "vinous" does not exactly suggest a vintage brand or indeed any particularly pleasing tippie. Some time ago in a description of this species, I used the word 'puce' as the nearest colour-name I knew, and although I must own that in my own mind I do not visualise exactly what 'puce' is, unless it *is* this bird's colour, I will repeat that description here.

Male: a puce-coloured bird with a black face; female: the same colour but rather paler and with no black on the face; both sexes with a few white spots on the side of the breast. In size they are about the same as a lavender finch, but slimmer in build, more the shape of a cordon bleu and the bills somewhat like that of the aurora finch. The young male is like the female and gets his black face at the first moult. I have had several birds, which at first I thought were females, but which soon assumed the black mask and thus declared their true sex. With these, as is the case with so many of our African birds, in which one can distinguish the sexes by their looks, one always seems to catch (for some reason, which it is difficult to understand) a good many more males than females.

I know of two good plates of this species, one in Vol. III. of "Bird Notes," p. 117; the other in Shelley's "Birds of Africa," Vol. IV., pl. 32. Both depict the two sexes, and of the two I consider the first the more accurate and much the happier in every way.

As a cage or aviary bird I have found the vinaceous firefinches fairly hardy, that is, as compared with many of their relations, while apart altogether from their rarity they have much to recommend them as desirable additions to a collection. I have had some two dozen at different times, all but one from the Gambia. There were, I think, nine among the first lot of birds I ever brought home (1902) from here, and since then I have brought two or three at a time in different years, the last being a single cock, which I brought home last July, one of the only pair I caught that season, both on the same day at Lamin Koto, at the very spot where the 1902 birds were obtained. The hen unfortunately escaped while being transferred from trap to cage. During 1910-11 I must have had quite a dozen, but that year, being prevented from coming home at my usual time, I set free or gave away my birds, as I could not keep them an extra twelve-month out here, or if I did attempt it, expect them to remain in good condition and health all that time. The one non-Gambian bird was a cock I bought for 2/- at Luer's a good many years ago out of a cageful of other Africans, one, which had somehow escaped the eagle eye of the Marseilles dealers, through whose hands most of these birds pass, or at any rate used to. I occasionally see odd ones out here in the catchers' cages and know of others which have been picked up at home as mine was, and as Mr. Silver in his interesting article in our November number (p. 35) tells us, he has at different times obtained specimens of the spotted (or as he preferred to call it, the bar-breasted) firefinch. This number has only just reached me in Africa, long after my notes on the same bird were far away in the Editor's hands; otherwise for uniformity's, or at any rate the indexer's sake, I might have used the same popular name as he has.

While on the subject of names, I may mention that on the few occasions on which I have known this species named in advertisements or elsewhere, it has usually been under the name 'Masked firefinch,' a title which would suit it well, but to which it should

have no claim, there being a true 'Masked firefinch' (*Lagonosticta larvata*), which is the East African representative of our bird, from which it really differs very little, being only a shade larger and perhaps rather darker in colour than it is. There is a good coloured figure of this species (*larvata*) in Reichenbach's "Singvogel," to which it is only fair that I should refer, after my remarks above on the Singvogel figure purporting to represent the spotted firefinch. This one of *larvata* is as good as that of *rufopicta* is bad. Like other East African birds the masked firefinch can have been but rarely imported in the past, and it is well within the bounds of probability that Reichenbach's figure was drawn from the East African *vinacea*; at any rate the drawing might well represent that species.

MISCELLANEOUS NOTES.

By HUBERT D. ASTLEY.

Amongst my geese are two females which are hybrids between the Magellanic and Ruddy-headed, given me some three years ago by Lord Tavistock.

Odd birds in every sense of the word! We call them the ladies-in-waiting, for one of them is in constant attendance upon a pair of Sarus cranes who live in one meadow, and the other never leaves a pair of Australian cranes in another meadow. Yet there are other geese, some of their own species, and some of several different ones. It would be very out of the way for one bird to do this, but for two to take up such a fancy is most extraordinary. Both of them are full-winged and often fly, but they never leave their respective meadows and are never far from their respective sovereigns. In the case of the Sarus cranes, their lady-in-waiting is *always* just a few yards behind them, and when they throw up their heads to utter their loud and far-reaching calls, the goose at once joins in the chorus. If the cranes walk too fast, the goose catches them up by flying after them, the Maharajah and Maharanee as I call them, for they were presented to me by the Gaekwar (of Baroda). As a mere lady-in-waiting, perhaps but a woman of the bedchamber, she is not permitted to feed at the same table, and if the goose

approaches too closely, their highnesses quickly show her her place, when she humbly retires to stand about four yards away. This attendance has been going on now for more than a year, and there on the other side of the hedge is an exact replica in the case of the Australian cranes, but they are less haughty, permitting their lady-in-waiting to eat of the crumbs which fall from their table.

Other geese come up to feed and depart again, but each of these geese-in-waiting remain with their respective lords and ladies. I have seen the Sarus attendant busily grazing, and not having noticed that the cranes have walked away; then, when the discovery is made, there *is* a fuss. Away she goes, flying off to overtake them, as much as to say—"Goodness me! I *shall* catch it." It is really an absurd sight, the great stately grey birds stalking along, very devoted to one another: and humbly following, there is always the goose.

* * *

Bye-the-bye! these hybrid geese are very handsome and might easily be mistaken for a pure species of their own. There are six in all: the males showing slightly the Magellanic blood, the females darker coloured Ruddy heads. In size they are nearer Magellanic than Ruddy head. One pair generally lives where the Manchurian cranes are kept, but they take wing elsewhere at times, some mornings coming past my bedroom windows, their snow-white shoulders and secondaries very conspicuous with the dark green bar dividing the white, as they fly. The two males exactly resemble one another, as also do the four females.

* * *

Geese are wonderful homers. A Ross' goose that I have, although full-winged, seldom ever flies, and if it does, will only circle round to settle again within the large wired enclosure, seeming almost afraid to be outside its protection. True! its mate is always there, and pinioned.

* * *

We ought to take notes as to when the cranes call constantly and loudly. I think it sometimes means fine weather. I have noticed that after a day of rain, when the clouds begin to grow

more sparse and a gleam of light appears towards the sunset, then the cranes shout and loudly call from meadow to meadow. This is in the winter on mild days. When it is cold they are mostly silent, but as the days lengthen out in February, then their trumpeting voices are heard, with a more joyful and triumphant timbre. The Manchurians' notes are very loud and powerful, but those of the white-necked cranes are more musical; fuller and rounder. At least, so it seems to me.

I think these crane-calls are very inspiring. I delight in standing still by the moat with the light of the setting sun shining behind the dark boughs of the big cedar^a and reflecting glories of red and gold in the water, and I take great pleasure in hearing at such moments the powerful sonorous cries of the cranes; ringing out, first from one point and then from another, seeming to fill the sky with sound.

* * *

I was greatly troubled in October and November last by a hawk which regularly came after and preyed upon my Palm doves. One evening I was in one of the orchards, one which is close to the aviaries, when the culprit, hearing me whistle in order to feed the doves, deliberately came along and settled in an apple tree within fifty yards of me. I shouted; clapping my hands; but there she sat saying "Go along with you," "Where's your gun?" and not until I was almost at the foot of the tree, did that wicked marauder depart.

She departed altogether two days afterwards, for on the following day, she was seen to stoop at a dove, luckily missing it; and I was told that she came every day regularly, and that doves' feathers had been found in several places where the birds had been struck down.

So the gamekeeper lay in wait. "I'd have shot her before Sir," was his excuse, "but you told me not to kill kestrels."

* Alas! since writing this, the magnificent tree (planted by the poet Wordsworth in 1827) was entirely uprooted by the hurricane on December 27th, and never again will the blackbirds flute on the topmost branches by day, or the owls hoot in its spreading boughs by night. The spirit of the ancient house seemed to dwell in it.

“*Kestrel?*” for I hadn’t in the rather dim light been able to discern the species when she came so boldly to the apple tree. Sure enough, kestrel it was, of the female sex. I shook her corpse. “So this is what comes of sparing such as you.” Hateful bird! and the whole place alive with field voles. She must have devoured at least a dozen of my poor palm doves, but I counted twenty-seven feeding together, after her demise, which was more than I had hoped for.

* * *

I spend many hours in digging and forking. There is still a good bit of ground where docks of vast size and clumps of nettles, with matted roots which spread like peacock’s tails, are to be found. The roots of the docks seem as if they might go through to the antipodes. And in working thus, I accomplish at least three things. I keep in health, I clear the ground of vile growths, and I collect worms and large white grubs with brown heads for the birds: the sun-bittern, the motmot, and such-like; and so often, as I laboriously heave up the clods, tied down by these docks and nettles for many a day, I hear close to me a loud “*mee-ow*” followed by a very small voice as if but a far-off echo of the other.

They always find me out, my pair of Australian wood duck (maned geese as we less euphoniously call them). They don’t seem to want any food, but really take pleasure in one’s company, which is refreshing to one, and gratifying, for how many a bird just approaches to hob-gobble its dinner, and looks upon one as a mere caterer. Not so these little maned geese, so determined to let me know they’re there; I, digging and digging, and then just behind me, within three feet—“*Me-ow*” from the lady and “*me-ow*” from him. Sometimes it sounds as if he was correcting her—“My dear, *not* so loud, but more like this”—and so there comes that tiny and gentle echo of her loud cat-call. It’s very entertaining!

CORRESPONDENCE, NOTES, ETC.

A FRENCH AVICULTURIST IN THE WAR ZONE.

Mrs. JOHNSTONE sends a letter from M. Delacour in France, in which he writes that although his château was invaded by Germans in September last, he only lost a few birds; amongst which were some rare waxbills; through the aviary doors being left opened.

M. Delacour successfully bred Buffon's touraços last year, and also *Columba speciosa*, as well as a great many hybrid Mikado-Elliott pheasants. He remarks "Je crois que personne n'avait jamais élevé de touraços; les jeunes sont maintenant pareils aux parents."

Of course M. Delacour is mistaken, for Mrs. Johnstone herself was successful in breeding touraços at Burrswood.

FOREIGN BIRD EXHIBITORS' LEAGUE CLUB SHOW.

SIR,—This society will hold its annual club show on Feb. 2nd and 3rd, 1916, at the Holborn Town Hall. The section will be entirely controlled by the League and about 32 classes have been provided for exotic birds. In spite of war I think British aviculturists still possess some excellent collections and a number of rare and beautiful birds should be benefited. Messrs. S. M. Townshend, R. J. Watts and Chas. Cooper, all experienced and successful exhibitors, have been engaged to judge.

ALLEN SILVER.

"VIGOUR AND HEREDITY."

DEAR SIR,—I have just read your review in the "Avicultural Magazine" for January of Mr. Bonhote's book on "Vigour and Heredity." As you will gather from the book, I took a very active part in much of the work, especially that in connection with the experiments relating to "Colour and Colour Inheritance" in pigeons.

The idea of "Vigour" and the theory of "Vigour" has always held me, and I can, personally, see "Vigour" working all throughout Nature, and many were the talks Mr. Bonhote and I had together concerning the subject. I would go so far as to say this, that the first human being who can absolutely control "Vigour" has the world at his feet.

I am sorry you cannot altogether agree with the idea that "colouring" in birds is due to "Vigour,"* and that fluctuations of this inward force are caused by environment, of which the main factors are temperament, humidity and food.

* We wrote that we *can* understand that through loss of vigour there follows a loss of colouring, although the RESULT of vigour has for its final object SOMETHING BEYOND THAT.—ED.

You say "Surely changes in colouration in summer and winter are greatly due to outward surroundings, for causes of concealment." Are not "outward surroundings" cases of environment? and as to the "concealment" idea, I am not in favour of holding too much to such a theory. You proceed to quote examples in the bird world to substantiate your idea of winter colouration from a "concealment" point of view and you unluckily choose two very poor examples to illustrate your point, namely the Snowy owl and the Iceland falcon, and you compare them to the raven. Of course the Snowy owl and the Iceland falcon possess quite as much "Vigour" as the raven, perhaps a stronger vigour even; but your remarks would lead the general reader to suppose that the owl and falcon named by you "assume white feathers in winter to conceal themselves from their prey."* In other words that these two species of birds possess a dark plumage in summer and a white plumage in winter. To put the matter quite briefly, I may as well say at once that the Snowy owl is a "white" bird all the year round, and that the males are "whiter" than the females, and that the degree of "whiteness" is assumed with age, because young birds of both sexes are heavily ticked with black during their first winter, and as they grow older the black marks gradually become less at each succeeding moult.

As regards the Iceland falcon, I am afraid you have mistaken the Iceland for the Greenland! The Iceland falcon (*Falco islandus*) is always a brown bird all the year through. † The Northern falcons have been one of my pet subjects for some time, and I consider them all to belong to one species and divided up into racial forms according to their environment, and thus you get the very darkest form of all (*Falco labradorus*) from Labrador and Hudson's Bay, grading into the slightly lighter form from Iceland (*Falco islandus*) to the still lighter form from South Greenland (*Falco holboelli*) to the whitest form of all from North Greenland (*Falco candicans*). For confirmation of the above theory see Dr. Hartert in *Novitates Zoologicae*, pp. 167-185, June 30th, 1915, Tring Museum.

From this you will see that when you choose the Snowy owl and Iceland falcon as cases to prove your theory of "concealment and colouration," you choose two examples which cannot assist your argument. Again, I have very grave doubts of the correctness of your theory that gorgeous coloured males of certain species, *e.g.* the males in the duck and pheasant families, have any effect on the females in selection of their mates; and to substantiate my point, I would refer you to the ruffs (*Machetes pugnax*); here we have a species of bird in which the males are very conspicuously coloured and vary greatly in degree of colouration, all the males "show" before the females, yet it has been proved conclusively by Mr. Edmund Selous that the females often "pair" with one of the most sober-coloured males, quite ignoring the brightest and most strikingly-coloured cocks; and on the "Vigour" theory these hens in choosing those most

* We are sorry that this was expressed in a manner which would lead to a misinterpretation of facts. ED.

† A *lapsus calami* — 'Greenland' was the bird referred to. — ED.

sober coloured males are choosing birds which possess the most vigour stored up in their systems, vigour which has not been expended on the outward show of feather colour, as seen in their more brightly coloured brothers.

Finally, as you say, the book opens up a fine field of original thought and should be read by every deep-thinking breeder of animals and birds.

Yours sincerely,

FRED SMALLEY, F.Z.S., M.B.O.U.

[We are much obliged to Mr. Smalley for his letter. He does not touch on the point as to why in many species of birds that nest in holes, the females are as brightly coloured as the males, also to take the ruffs as an example of choice of the more sober colouration on the part of the females, is to select a very abnormal and exceptional case, and furthermore if the reeves often "pair" with one of the sober-coloured males, they surely as often select what we look upon as the more gaily marked ones. But we referred to gorgeous coloured males whose colours are 'fixed,' and suggest that those colours have become so because through the ages they have been accepted as the most pleasing in the matrimonial market. Surely the display of the peacock is intended as an attraction; and are all the wonderful appendages of male paradise birds, with their quiverings of erected 'wires,' shields and so on, merely the result of self-absorbed masculine vanity? or of vigour without any final object?

As to the example of Snowy owl and Greenland falcon, etc., one only gave it *en passant*, without sufficient thought for certain details, to instance that some birds which live in regions where for a large portion of the year they are very invisible amongst the snow-clad surroundings, have apparently assumed a plumage in consonance with their environment in order to assist them in concealing themselves either as preying or preyed upon, whilst the raven remains conspicuously black on a white background. The ptarmigan most certainly assumes plumage in summer and winter which effectively conceals it.

But we hope members will read Mr. Bonhote's book, for the review was written mainly in order to advise them to do so, and in no mere spirit of criticism.

EDITOR].

NAME OF SUPPOSED TROUPIAL.

SIR,—I have just received in exchange from Cross, of Liverpool, a rather interesting pair of South American troupias, and I am wondering whether you, or any of your readers, could name them for me.

In size they are between *A. humeralis* and *A. thilius*. The cock is glossy blue black: the shoulders and upper wing coverts white and very conspicuous when flying. The hen is entirely bright bay, the two central feathers of the tail being white, edged with bay and also very noticeable. The bill is long and stout and equal to that of the Military troupias. In the cock it is grey and in the hen dusky black. The legs in both sexes black.

They feed principally on seed but appreciate mealworms. I have not

noticed them touch either soft food or fruit. I should very much like to have them named, as I am intending to try and breed from them this season.

WM. SHORE-BAILY.

* * * *

The question in my mind is whether our member's birds are even examples of the family *Icteridæ*. In the late Dr. Scater's Catalogue of the *Tanagridæ* and *Icteridæ* in the British Museum I can find no description of any purplish-black species of troupial with white wing-coverts; indeed the only species in the volume which seems to approach Mr. Shore-Baily's description is the black tanager (*Tachyphonus melaleucus*); but Dr. Scater does not mention the white on the central tail-feathers of the hen: still it must be remembered that all the descriptions in that volume of the Catalogue are cut down to the closest limit possible.

When I first received the silky cowbird of Argentina, now many years ago, I wrote to the late Mr. Abrahams describing the species to him and asking him whether it was likely to be the black tanager. He replied that if it did not possess the white wing-coverts it was the silky cowbird, and on looking the two birds up at the Natural History Museum I was able to confirm his statement.

A. G. BUTLER.

[We take this extract from "Country Life."]

SIR SCHOMBERG McDONNELL'S CARE OF WILD BIRDS.

SIR,—May I add my tribute to the memory of Sir Schomberg McDonnell, whose death was so feelingly recorded in your Christmas number? He was a keen ornithologist. The Royal parks are under the control of the Office of Works, and during his secretaryship, Sir Schomberg, as I can bear witness, took the greatest interest in the preservation of the birds, particularly those in Richmond Park, It was there that I met him. One Sunday afternoon in April, 1911, as I was watching a family of great crested grebes on the Pen Pond, a gentleman joined me who, after borrowing my binoculars to look at the grebes, suggested a walk. In previous years herons, which nest in the Park, had sometimes carried off the young grebes, and my companion, who, it was clear, was someone in authority, told me that, in order to preserve the grebes, he had given orders to the keepers to shoot any marauding heron which might be caught red-handed. I soon found that this pleasant stranger had an intimate knowledge of the birds to be found in the Park. Among other things, he told me that he had once seen a curlew bunting there—"a harmony in chocolate and lemon" was his description of the bird. Could anything be more apt? Presently he asked if I would care to go into Sidmouth plantation to see the heronry. Of course, I gladly assented. As he unlocked the gate into the wood a keeper asked his name, and it was then that I learnt that my new friend was Sir Schomberg McDonnell, at that time secretary to the Office of Works. He asked me to let him know if I discovered anything out of the common in my frequent visits to the Park and accordingly

we corresponded at intervals during the next year or so. Once I was able to tell him of the coming of a solitary American robin, which made its home close to Robin Hood Gate one spring, built a nest, and after some weeks disappeared. In his reply, while admitting that the occurrence was interesting, he rather regretted it, for he explained that his object was to maintain Richmond Park as a preserve for purely British birds and animals. For the same reason he resented the introduction by some misguided enthusiast of the grey American squirrels, which of late years have overrun the place; and he asked me to keep an eye on them, since he strongly suspected that they were robbers of birds' nests. On the other hand, I believe it was he, in furtherance of his scheme of an all-British preserve, who caused the badgers, which have since founded a flourishing colony, to be turned down in Richmond Park. I never saw Sir Schomburgk McDonnell again, but I owe him a lasting debt of gratitude. During that pleasant Sunday ramble he gave me a practical proof of his keen sympathy with a fellow-enthusiast and of his readiness to help him, by offering spontaneously a boon which has been of inestimable value to me, and has been the means of adding tenfold to my knowledge of birds.

J. R. H.

[We are indebted to "Bird-Lore" for these two cuttings].

THE CAROLINA PAROQUET IN FLORIDA.

[In a letter by Mr. W. F. H. McCormick, to Mrs. Kirk Munroe, sent to the Editor of Bird-Lore by Mrs. Munroe, mention was made of the occurrence of the Carolina paroquet in southern Florida. A call for further information brought the following response from Mr. McCormick. We omit his reference to the locality in which the birds were seen. - F. M. C.]

In reply to your request to Mrs. Kirk Munroe in your letter of July 6, I will say that there is very little to make "a detailed statement" of in regard to my seeing the Carolina paroquet.

I was down in that country on a pleasure cruise during the last weeks of March and early April, 1915, and first saw the birds while I was following a panther through thick scrub. At that particular time I did not pay much attention to them, as I was intent on the bigger game, but some days afterwards I visited the same place and saw about a dozen of the birds flying about and eating the berries of the mastic and rubber trees. This time I made sure that they were the real paroquets. I am not sure that they were nesting, but supposed they had young, for they carried berries away with them every time they left the trees. On my last visit (the first week in May) I saw none.

I will also say that I made no mistake of identification, for I have been familiar with the paroquet since childhood, and also have a speaking acquaintance with other parrots, gained in a two years residence in Central America.

Cocoanut Grove, Fla.

W. F. J. MCCORMICK.

THE CAMPBIRD.

The books call him the 'Rocky mountain jay,' but he isn't as much of a 'jay' as the long-crested chap, or any of his other relatives in Colorado. He is just a plain 'Campbird,' as full of curiosity, and with just as mighty an appetite, as his first cousin in Canada, or the Adirondacks. Somehow or other, I don't like to hear him called a 'Camp Robber,' even if he is ever anxious to take scraps where he can't get everything else in sight. After all, he cannot sidetrack memories of long, cold, starvation winters, and can't help trying to be well supplied for the next to come: his body remembers if his mind doesn't.

Many years ago, while camping in our Rockies, I watched and fed for several days a campbird which had lost one leg, and only this past summer I saw and fed another which had lost nearly half of its lower mandible. Surely, one must admire the grit and persistence exemplified in these two birds, even though they may have been automatic in them. It's hard enough in bird world, to dodge all the hundred-and-one things which spell death, when one has a complete equipment to battle with element and enemy, and we can never know how much more difficult it must be, in the face of such physical disabilities, to avoid being at once blotted out; nevertheless, both of these birds were adults and fat and vigorous. One wonders how such losses come about, for they are not rare with birds, and evidently do not necessarily lead, in the struggle for existence, to prompt death. Accidents in bird world must be many, and the chances for their occurrence still larger, and it is probable that most do lead to early death. I am glad to know, however, through personal knowledge, that many birds survive physical injuries of considerable magnitude, and yet afterward seem full of bird happiness and health. I once saw a robin strike against a telegraph wire while in full flight, and still make off as if not disabled; house finches are frequently seen minus a foot or a leg, or with a foot or a leg crippled. A flicker (woodpecker) was brought to me some time ago, one leg of which had been broken, and healed at an angle of 90 degrees, without the deformity affecting the activity or general condition of the bird. Birds are often caught in deadfalls or steel traps, and in the latter I have found at different times, eagles and turkey buzzards, and once a magpie. A steel-trap might completely cut off a leg, capturing and liberating the bird at one stroke. I know that bird accidents are many, but how most of them come to pass I don't know, nor do I know how Nature treats the results. I have never been lucky enough to find a bird that had dressed its wounds with feathers, or made of them a splint for fractured bones. May be, if I am patient long enough, and keep wide awake and open-minded, I will.

Born and raised in lands or at altitudes with almost perpetual snow, they are inured to hardships; yet the long, cold winters must press these cheerful campbirds hard in their efforts to find food and keep warm. It is small wonder that everyone of them, like a dog after a long fast, swiftly snatches up and hides every least scrap of food. I have often watched one take a large piece

of bacon rind, almost too heavy to carry, and *cache* it under the loose bark of a dead tree or stump; and the wish within me has followed just as often, that no other bird or beast might discover it, in order that the bit of food would help the devoted mother bird to keep her eggs warm in the bitter cold of late winter. In the latter part of last June, our camp was constantly visited by campbirds, several being youngsters of the year, their bluish bills and darker heads pointing unmistakably to immaturity. It was at this camp that I had the delightful and unusual experience of having one of these birds boldly take meat from my hand, without any preliminary training, and also take food from my hand, while I was seated alone in the timber, away from camp and its possible associations of safety, and food abundance. This bird (or these two birds?) hopped boldly along the ground, or on the log, and fearlessly took meat from the outstretched hand, and with the second piece proffered, tugged hard, while I mischievously held it fast. I have never seen them disagreeable to each other; they always impress me as jokers, deceiving their bird neighbours by imitating perfectly a hawk's scream or other birds' songs. They are always good company and greet one at each new camp as though they were the ones just left at the old camp. One of my camping companions always said to them, as they appeared when we unpacked and were making a new camp "Hello! got here ahead of us, did you?" I never tire of watching their adroitness at 'lifting' an unguarded bit of food. The Colorado bird is just as facile in spearing a chunk of butter as is his Canada cousin in carrying off a biscuit almost as large as himself. One of the pleasantest recollections of many camps in high altitudes, is that of a campbird uttering his delightful whisper song, while perched on the tip of a tall spruce whose tapering top was aglow with the last warm lights of a dying day.

Denver, Colo.

W. H. BERGTOLD, M.D.

THE EDITOR ASKS FOR ARTICLES AND NOTES.

THE TYRANT OF THE SHORES AND ISLANDS.

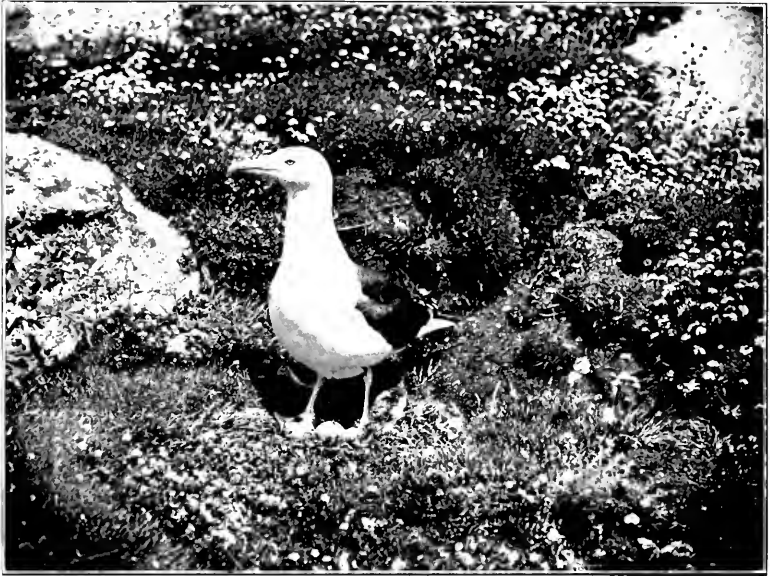


FIG. 1.—GREATER BLACK-BACKED GULL. STANDING OVER EGGS.



FIG. 2 GREATER BLACK-BACKED GULL. SITTING.

THE AVICULTURAL MAGAZINE,

BEING THE JOURNAL OF
THE AVICULTURAL SOCIETY.

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MARCH, 1916.

NOTES ON WADERS SEEN IN THE ISLES OF SCILLY.

By E. INNIS DORRIEN-SMITH.

These islands are a perfect place for waders of all kinds, with their flat shelving beaches and stretches of sand at low water round the coast, fresh water pools and marshy ground in places inland and rocks and seaweed for oystercatchers, turnstones, ring plovers and purple sandpipers.

The purple sandpiper is probably the least well known of the more common waders, and inhabits the outer rocks where the ocean seas break in. They race up and down, dodging the waves and spray, just lightly using their wings when their feet will not carry them fast enough. Seldom more than one or two are seen at a time, but they have their special haunts where they are nearly always to be found and invariably in the wildest places. Their breeding-place is far away in the north, but a few usually remain here all the summer. Turnstones are by no means so exclusive in their haunts, and, besides braving the breaking seas on the outer rocks with the purple sandpiper, they abound on the shores and sandy beaches of the islands. At all times of the year they are to be seen, and in June in full breeding plumage, though generally they are very scarce from mid-June till towards the end of July when they return with their young ones. I was asked a short time ago if it were possible to catch turnstones in these islands and if there were many here. To catch them I fear is a very difficult task, as the ebb and flow of

tide would wash away any structure erected, and they are nearly always seen hunting for their food amongst the stones and seaweed, or running about just on the water's edge or on the flat sands when the tide is low.

A few years ago the question was raised as to whether they bred here, and a man living in one of the islands produced what decidedly appeared to be a turnstone's egg which he had found on one of the outer islands called Annet, where sea birds and sea pink abound in the spring-time. It is possible they may have nested, but it has never been absolutely authenticated, though the egg seems fairly conclusive evidence, and I see in Gould's book of "Birds of Great Britain," a turnstone's egg was found amongst a collection belonging to a fisherman in the Farne Islands and picked up there. I was under the impression that their nesting place was under ledges of rocks on the sea-shore, but, again in Gould's beautiful book of birds I find he gives a description, quoted from Mr. Hewitson who went in search of their nesting place on the coast of Norway. He says: "We had visited numerous little islands with little encouragement and were about to land on a flat rock, bare, except where here and there grew tufts of grass and stunted juniper clinging to its surface, when our attention was attracted by the singular cry of a turnstone which in its eager watch had seen our approach and had perched itself upon an eminence of the rock, assuring us by its querulous oft-repeated note and anxious motions that its nest was there. We remained in the boat for a short time, until we had watched it behind a tuft of grass, near which, after a minute's search we succeeded in finding the nest. It was placed against the ledge of a rock, consisted of nothing more than the dropping leaves of a juniper bush under a creeping branch of which the eggs, four in number, were snugly concealed and admirably sheltered from the many storms, by which these bleak and exposed rocks are visited, allowing just sufficient room for the bird to cover them. We afterwards found many more nests with little difficulty although requiring a very close search."

I have never myself attempted to keep any of the waders in captivity, being blessed with the great advantage of seeing them here in their wild state. I am told that turnstones have been successfully

kept, in fact it seems there are few birds that will not do in captivity with an enterprising aviculturist.

My experience of keeping any of these "shore birds" is confined to the common oystercatcher, and what a delightful bird he is with his wild warning cry. From my window in the summer I can hear their voices as they call to each other, at any hour of the night, and one has only to go early in July and watch one of the many pairs on the sea-shore to find their young ones, though they are marvellously clever at hiding themselves on an open sandy beach, the young being marked in such a way that they are exactly like the stones and sand. Our last effort at keeping a young oystercatcher was a dead failure; after having found and caught it with much trouble my sister put it safely in a wire run near the fresh water pool. The following morning she was awakened at daylight by the frantic calling of the parent birds, which continued louder and louder as they had discovered where their lost child was imprisoned. This was far too much for my sister who had to get up there and then and go out and let the poor cherished infant go, to the great delight of the old birds, who quickly calmed down and allowed my sister to return to her bed and sleep in peace!

The ringed plover is another of our common shore birds and goes by the name of "Kawilly" by the people in these islands, and that is exactly the sound they utter—"Kawilly, kawilly, kawilly"—in a rippling tone comes across the sand when the tide is low, and few sounds are more delightful. They are almost the tamest of our shore birds, and if one is sitting on the beach, will run past quite close by. Their nests are plentiful along the sandy beaches and on the flat sand dunes and consist merely of a concave hole in the sand with usually three eggs, the same as their companions the oystercatchers. The young might be training for a race-course the way they run, and when any human being appears they scatter in all directions till quite out of breath, when they crouch down and hope they will not be seen, and wonderfully hard they are to see, especially on a shingle beach or amongst small stones. The old birds meanwhile become very alarmed, and I have seen them going through all kinds of antics, pretending to have a broken wing and

behaving in a most odd way, after the manner of birds, to take off one's attention from their precious children.

Amongst other commoner waders on these shores are the redshanks. They are here all the year round, except just in the breeding season. The first ones arrive about the end of July and they are usually in knots of four or five; their loud calling note is quite unmistakable, and a delightful wild cry it is. They vary their haunts from the sands and rocks across the sand dunes to the fresh water pool. I have searched up the Fjords in Norway for their nests in the long grass and in the marshy flats and very difficult they are to find, and only by watching with patience is it possible at all.

The common sandpiper or summer snipe is their companion in the breeding season on the edges of the rivers that come rushing down to the Fjords. Their first note is usually heard in these islands about August, but some years I have heard them quite early in July, and late in May I believe they sometimes nest in Cornwall. They are not usually seen here in the winter months. A delightful way of observing the above birds is when bathing in the summer. I have approached within a few yards of sanderlings and dunlins which have just arrived from their nesting-places, usually far away in the north, and seem entirely engrossed in hunting for their food in the wet sand; they dig in their bills, then run a yard or so as if there was no time to be lost and in go their bills again, and so the time flies till the tide rises and covers their feeding ground, when there is nothing left for them but to plume themselves on the rocks or fly to the marshy ground inland. Usually the first heavy rain in August brings in quantities of these little waders and also in the spring migrations they can be seen racing along the wet sands.

Among the lesser common waders come the ruff and reeve, usually seen at the time of migration, and bar-tailed godwits looking for their food far out on the stretches of sand at low water or round the fresh water pools.

Green sandpipers are only occasional visitors, but are quite unmistakable with their very dark backs and white beneath. Greenshanks are seen usually in solitary specimens with the com-

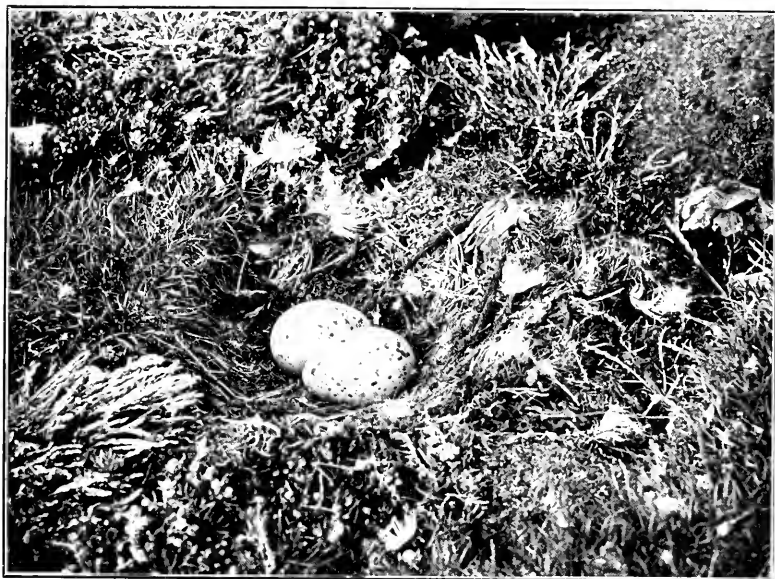


FIG. 3.—NEST AND EGGS OF GREATER BLACK BACKED GULL.



FIG. 4.—YOUNG GREATER BLACK-BACKED GULLS

moner waders on the sea-shore, and the delightful whimbrels appear in April and May, going by the name of May birds; its shrill whistle being so easily distinguished from any other bird. Few sounds are more charming than the chorus of birds on a still spring night and sometimes the whole shore seems to waken suddenly. Curlews, whimbrels, oystercatchers, redshanks, ring plovers and turnstones give a concert of their own.

Grey plover, phalaropes, knots, stints, are also among the visitors. One day in August, some years ago, I was much excited by seeing a pair of birds quite unknown to me. I observed them through glasses and took particular notice of their long bills, much longer than the ordinary waders, and the rich brown colour of their plumage; they were feeding busily among the rocks and seaweed on the shores of the island of Samson at low tide. They proved to be a pair of brown snipe which had found their way from North America and Hudson's Bay right across the Atlantic. A year or two later we had another visitor from those parts. One Sunday morning, feeding by the fresh water pool, was seen from the terrace in front of our house, a strange wading bird with an unknown voice. We had always hoped one day to see a yellow shank, but this bird proved to be a still rarer variety, the greater yellow shank (*Totanus melanoleucus*) or "tell tale" from Hudson's Bay, the only specimen ever recorded in Europe. Their nickname comes from their loud cry that warns the seals that danger is near when the sealers are hunting their prey on those distant shores.

The following is a list of waders, of which specimens have been obtained in these islands, several being American species:—

Turnstone	...	...	...	<i>Streptilas interpres.</i>
Sanderling	...	...	...	<i>Calidris arenaria.</i>
Oystercatcher	...	...	...	<i>Hæmatopus ostralegus.</i>
Curlew	...	...	...	<i>Numenius arquatus.</i>
Whimbrel	...	...	...	„ <i>phæopus.</i>
Esquimeaux Curlew	...	...	...	„ <i>borealis.</i>
American Solitary Sandpiper	...	...	...	<i>Totanus solitarius chloropygius.</i>
Greater Yellow Shank	...	...	...	„ <i>melanoleucus.</i>
Spotted Redshank	...	...	...	„ <i>fuscus.</i>
Redshank	...	...	...	„ <i>calidris.</i>

Green Sandpiper	...	...	<i>Totanus ochropus.</i>
Wood Sandpiper	...	...	„ <i>glareola.</i>
Common Sandpiper	...	...	„ <i>hypoleucus.</i>
Greenshank	...	...	„ <i>glottis.</i>
Black-tailed Godwit	...	...	<i>Timosa melanura.</i>
Bar-tailed Godwit	...	...	„ <i>rufa.</i>
Ruffs and Reeves	...	...	<i>Machetus pugnax.</i>
Brown Snipe...	...	...	<i>Macroramphus griseus.</i>
Curlew Sandpiper	...	...	<i>Tringa subarquata.</i>
Knot	...	...	„ <i>canutus.</i>
Little Stint	...	...	„ <i>minuta.</i>
Temminck's Stint	...	...	„ <i>temminckii.</i>
Schintz Sandpiper	...	...	„ <i>schintzii.</i>
Buff-breasted Sandpiper	...	...	„ <i>rufescens.</i>
Pectoral Sandpiper	...	...	„ <i>pectoralis.</i>
Dunlin	...	...	„ <i>variabilis.</i>
Purple Sandpiper	...	...	„ <i>maritima.</i>
Grey Phalarope	...	...	<i>Phalaropus lobatus.</i>
Red-necked Phalarope	...	...	„ <i>hyperboreus.</i>
Stilt	...	...	<i>Himantopus melanopterus.</i>
Grey Plover	...	...	<i>Squatarola cinerea.</i>
Ringed Plover	...	...	<i>Charadrius hiaticula.</i>
Kildeer Plover	...	...	„ <i>vociferus.</i>
Little Ringed Plover	...	...	„ <i>curonica.</i>

BIRDS IN FLANDERS DURING THE WAR.

By LT.-COL. W. TWEEDIE.

I send a few notes, very uninteresting I fear, about the bird-life here.

We have been for some time in the same spot in Flanders, and have seen the autumn pass and the winter take its place. We are within very easy shell range of the Bosch lines, and never a day passes without shells of all descriptions flying backwards and forwards. In spite of this, there is quite a fair show of bird-life in the

neighbourhood. We are close to a château which is surrounded by a moat with a small ornamental lake in the grounds. This lake held, and doubtless still holds, some fine carp and many small bream, dace, and roach. Many of the fish have been killed by shells bursting in the water. The other day, during a particularly noisy bombardment, I counted over thirty water hens feeding in a field adjoining the lake; they paid not the slightest attention to the shelling. A kingfisher haunts the lake and takes his toll of the small fish. There are some fine trees in the grounds, though their number is diminished by shell fire and the furious gales we have had this winter. I have seen several spotted woodpeckers on the trees there, and one tree creeper. By far the commonest birds are magpies, I counted over 20 on one tree and they are all over the place in pairs and small parties. One can see the numbers of old nests in the tops of the tall ash trees. There are large numbers of hoodie crows. One knows how wary this scoundrel is at home, here he is quite tame and pays no attention to the bursting of shells. I have seen some carrion crows and there are many rooks and jackdaws.

Of game birds we see few, but the other night I saw two cock pheasants with four hens feeding unconcernedly while shells were bursting within three hundred yards of them. There were some fine coveys of partridges on this farm in November. The roots are all lifted now and I have seen none for some weeks. They were the common partridge, not the French bird. Even now an occasional hare is to be seen in the fields. I have seen no rabbits, though the people of the town tell me they were plentiful a year ago. Only once have I seen any plover, a flock of about fifty passed over, but did not alight. There are some wood pigeons and, some time ago, turtle doves, but they have gone. Birds of prey are few and far between; I have seen some sparrow hawks and a couple of kestrels and one large hawk flying fast and high. I could not distinguish the species. Flocks of chaffinches were all over the place a couple of months ago, but now there are only a few, and the same with wagtails. I saw none but the pied wagtail and one yellow wagtail. Small flocks of larks are in the bare fields, and there are a few blackbirds and thrushes. They sing whenever the sun shines, but this exercise is unlikely to strain their vocal chords as the sun very seldom shows

himself. Only once have I seen any redwings, and very occasionally a fieldfare. We have had no cold weather so far, but constant rain and damp, and some gales. There are a few robins, but they do not seem to be so friendly and tame as they are at home.

The other day some of my men were demolishing an outhouse which had a thatched roof. Under the thatch they discovered a curious little animal hibernating in a straw nest. It took half an hour to waken up, and by that time was safely secured in an empty tin. I do not know the animal and will describe it as best I can, perhaps one of your readers could identify it.* It is about the size of a small rat, colour on back rather darker than an ordinary rat; underneath a dirty white; tail long and hairy but not bushy with a distinct tuft with a grey tip; grey patches on the cheeks; black eyes and rounded ears, larger than a rat's. It nibbled a little short-bread and then proceeded to go to sleep again. I moved it into more comfortable quarters and gave it a good nest of hay. It tried to bite me when I was moving it, but couldn't bite through my glove, although its teeth are pretty strong yellow rodent teeth. It disappeared at once into the hay and has made no movement since, so I suppose it has resumed its rudely interrupted winter slumbers. I hope to bring it home if we both survive!

DEATH OF A TAME SNOWY OWL.

By W. H. ST. QUINTIN.

An old favourite which has lately died here deserves a short obituary notice. Snowy owls are not generally considered long lived in captivity, why, it is hard to say, for some of the other Northern owls thrive in well managed aviaries. Some of our members will have heard of a female Eagle owl which died in Mr. Meade-Waldo's possession, whose age was known to exceed 70 years. And Ural and Lapp owls have lived long in the same aviaries. But "Snowies," for some reason, are much more difficult subjects. I have found them to be easily upset if they do not regularly have, what falconers call "casting" (the skin, fur, and bones) with their prey, and

* Perhaps the oak dormouse.—E D.

especially is this of the greatest importance if the aviary is floored with earth or gravel. Grit appears to irritate the lining of the stomach, and the bird cannot get rid of it if there be no materials to form the pellets, which all raptorial birds (and many others) eject, after they have digested a meal. I attribute such success as I have had to my birds having invariably had their food given in its natural condition, and also to the aviary having been floored with glazed bricks.

The bird that I have just lost was brought for me from Norway by my old friend and neighbour the late Sir Henry Boynton, on his return from his fishing at the end of the summer of 1891. The bird would probably be hatched early in June, so when he died the other day he would be well over $24\frac{1}{2}$ years old. He survived his mate brought over at the same time about five years.

1891 was what is called in Norway a "Lemming Year," and hordes of the little rodents invaded the Stordal valley, down which the Stockholm railway runs from the Swedish frontier to the city and port of Trondhjem. I was fishing on the same river two years later, and though there were no living lemmings left in the valley, their skins and skeletons were still plentiful in places where they had perished; in one place where thousands must have fallen over a precipice on to the railway. As always happens, this migration of lemmings had been accompanied by beasts and birds of prey. Wolves were unusually numerous and bold that year. The Pastor's yard dog was taken, and there were raids on the farmers' live stock; and wandering, half-wild, reindeer were killed. Rough-legged Buzzards, Goshawks, and Snowy owls were particularly numerous. Lapps brought in from the mountains, sometimes walking for several consecutive days, several broods of Snowy owls, also some Goshawks, and a Golden eagle, which latter is, or lately was, living in the Zoological Gardens.

One day a Lapp had just been paid for some nestling owls, and was leaving the house when something was seen to move in a bag slung over his shoulders. Asked what he had there, the little man produced a pure white Snowy owl, which he was taking down the valley to the official who gave the Government reward. The bird was quite unhurt, and it turned out that, when the Lapp was

at the nest, the male bird dashed at him and actually got his claws entangled in the man's clothes and was captured; the poor old hen bird being almost blown to pieces at very close quarters by a large spherical bullet from a rifle. Needless to say the skin was claimed and also the living bird, which with care quite recovered, and eventually came into my possession with several of the young. In Norway, where fresh meat of all kinds is always scarce, there was much difficulty in catering for the considerable collection of birds which had accumulated. The supply of old hens, magpies, hoodie crows, and fieldfares was soon exhausted. At last an ancient pony was bought and slaughtered, and his meat kept well in the ice-house which is generally to be found near Norwegian salmon rivers.

Whether this white male was the parent of my birds I could not learn, as individuals from more than one nest were brought home. But, though after some six or eight moults, my male bird became almost entirely white, except about three of the tertiaries on each wing, which always were marked with black spots and splashes, he never became pure white; and curiously, towards the end of his life, he became a good deal more marked, both on tertiaries, secondaries, and wing coverts. This partial reversion to the plumage of the immature must I think be very unusual. My "snowies" frequently hatched young, but the nestlings are delicate and suffered a good deal in hot weather. But for this I have no doubt we should have reared many more, but when hot weather came in July, the young birds were put off their food and soon went wrong. In cool summers several were reared. There was one of them until lately in the owl aviaries in the Zoological Gardens. Several were sent to the aviaries of a friend whose raptorial birds are the admiration of all connoisseurs; but somehow the snowy owl has never thriven there for long, perhaps owing to the aviaries being too much exposed to the sun for these alpine birds.

The last note I have of these owls having hatched young was in 1909. On July 4th of that summer two young, aged a fortnight, were thriving, but my recollection is that they were for some reason not reared, I think owing to the old female going wrong for a time. This was when the parents were 18 years old and when the female was certainly beginning to show signs of age.

I ought to say that my birds practically lived upon rabbits. Mice and young rats suit them well enough, but I remember two cases where the sudden illness and death of a snowy owl could only be attributed to its having been given an old, and probably very tough, rat. Birds, my "Snowies" never cared for, and I have known them refuse them, when I have thought them to be hungry.

MY SWAINSON'S LORIKEETS.

"GINGER" AND "MUSTARD."

By GUY FALKNER.

It is now eight years since I had "Ginger" (the hen) given to me. She had been brought over from Australia in a canary cage and a more dejected looking object I had never seen. Ginger soon got tame, though when I received her she was very wild. "Mustard" (his Sunday name being "Ko-ko"!) I have only had quite a short time, but he was fairly tame when I got him. Both my birds are allowed to fly where they like ; their cage is in the kitchen, but they use the open kitchen window as a "bolt hole" and spend most of the day flying about the kitchen garden, they are so exceptionally tame that I have no fear of them flying away altogether. If I go out into the garden they will both fly down to me, in fact, if I go for a walk they come too, Ginger as a rule sits on my shoulder, but Mustard prefers to fly from one tree to another after me. I think that strangers who see my menagerie out for a walk (for a red deer, a bull-dog, a goat, and a jackdaw invariably come too) must think me an escaped lunatic.

The Swainsons delight is to sit on my writing table and tear up *any paper* they can lay their beaks to, also they try the inkpot when they are thirsty, though they seem to think, having tried it, that a little ink goes a long way. Ginger, I am sorry to say, has a taste for *gin* : she loves to sip it if she gets the chance, but the other bird "Mustard" won't touch it. When they are on the floor, instead of flying on to my hands or shoulders, they climb up my trousers and my coat and so on to my shoulder.

I feed my lorikeets chiefly on *very* sweet milk and sponge

cake, also a little canary and hemp which they seem to enjoy, in addition to this they have as much grass as they like to eat, a bit of carrot, and any ripe fruit going, and, lastly, they have cocoa about five o'clock; not a bad bill of fare either when one comes to think of it.

If any one has been patient enough to read this account of my lorikeets I will just tell them this: "If ever you want really affectionate, tame and amusing birds, buy a pair of Swainson's lorikeets, but don't blame me if their 'songs' get on your nerves, just grin and bear it, they are worth it in the long run."

THE BOMBAY BIRD-MARKET.

By E. WM. HARPER, F.Z.S., M.B.O.U.

After an absence of about a dozen years from India, it was with no small degree of pleasure that, having left British East Africa thirteen days previously, I sailed into the splendid harbour of Bombay early in 1915. When the usual Customs formalities had been negotiated and hotel accommodation secured, it was not long before I wended my way to the Crawford Market—a place where everything edible in India can be purchased.

But the live-stock department, with which we are specially concerned, is situate outside the main building. The old, long, low, one-storeyed structure, which used to be devoted to cage-birds, is now occupied by poultry and game-birds: turkeys, geese, ducks, fowls, pigeons, partridges and quails. The new circular building for birds, surrounded by its spacious verandah, is situate close to the old one. It contains eight or ten lock-up shops, shaped like the segments of an orange, each having its own share of the circular verandah.

A stroll round the building revealed the following birds. Commencing with parrots, the indigenous species included: Ring-necked, Alexandrine (Rock) and blossom-headed. Exotic: Green and yellow Budgerigars, one Greater Vasa, one Lesser ditto, three pairs of Rosellas, one pair of Many-colours, one or two Yellow-fronted Amazons and African Greys, the latter being priced at £5.

During my stay of two months at Bombay, a boat arrived from the Straits bringing three or four dozen Blue-crowned Hanging Parakeets (bat-parrots, as Mr. Finn appropriately calls them), which all found their way to the bird-market. The Greater Vasa had only one eye, but was otherwise in fine condition; the price of the Lesser was Rs. 40 (£2 13s. 4d.) and the seller was not open to an offer.

Mynahs were well represented: Brown, Crested, Black-headed, Pied, and Rosy Pastors. A few of the Greater Hill-Mynahs (Grackles)—reputed linguists—were in evidence. About two dozen assorted unfortunate Mynahs, with a few Red-vented Bulbuls were crowded into one cage; they were only fed at intervals on suttoo (pea-meal) paste and were always hungry. So, when visiting the market, I made a point of taking bananas for them, which were voraciously devoured. Green Bulbuls (Fruit-suckers), White-Eyes (Zosterops) and Sun-birds were conspicuous by their absence. Other insectivorous birds were a few Red-billed Liothrix, two Grey-winged Ouzels, a few Wagtails, two or three Greater Racket-tailed Drongos in poor condition, and a single Chinese Jay-Thrush (Pekoe).

Coming to the seed-eaters, Chinese canaries were the most numerous, dozens arriving by every steamer from the Far East. Red Avadavats, Spice Birds, Mannikins, Java Sparrows (both grey and white), Rose Finches, Crested Black Buntings and Red-headed Buntings were all on view. So many Java Sparrows have escaped in India from time to time that I believe they have now established themselves in that country. I was astonished to see a few English finches: Goldfinches, Linnets, Chaffinches and Redpolls.

Some Peafowl were in the market, but I had more than once seen natives in the streets of Bombay offering them for sale. Each bird was blindfolded by means of a piece of cloth tied over its head, the bird sitting upon a split bamboo five or six feet long, carried on the head or shoulder of the vendor. The birds, though freshly-caught, sat quite still—generally one at each end of the bamboo—swaying to and fro to the motion of their semi-naked bearers.

Chukor Partridges, Grey Francolins, Black Francolins, Rain Quails, Common Quails and Bush Quails were all present, but no Button Quails, which I particularly wanted. The birds' cages were interspersed with pens containing pug dogs, Silkie and Langshan

fowls from China, a pair of African lion cubs, a bear, lemurs and monkeys, whilst glass globes suspended from the verandah contained fan-tailed goldfish from the Far East.

Needless to say, I was very much disappointed at the small number of birds on view, the scarcity being due to the war. Some years ago, when travelling some 800 miles from Upper India to Bombay by mail train, I found that a consignment of live Himalayan birds was on the train *en route* to the market at Bombay. The cages were of the usual Indian pattern—split bamboo, about $3\frac{1}{2}$ feet long, 2 feet wide, 6 to 10 inches high, divided into 6, 12 or 24 compartments. Every four or five hours, at convenient stopping-stations, the native in charge of the birds removed them from the dark van, placing them on the platform to feed and water them. I was surprised to see Magpies, Laughing-Thrushes, and many other birds receive a “quick lunch” consisting of raw rice, which they readily picked up and swallowed whole. Amongst that consignment were no less than two dozen Silver-eared Mesias, which were ultimately shipped to Italy.

These notes are written in England entirely from memory, eleven months after my arrival at Bombay, so I must crave the indulgence of readers in case of any omissions.

ON THE BEST SYSTEM OF FEEDING INSECTIVOROUS BIRDS.

By P. F. M. GALLOWAY.

FOOD, EXERCISE AND CLEANLINESS.

Here we have the three most important items; one without the other is sure to bring trouble sooner or later.

In writing this article on feeding, &c., I do not wish to pose as one able to keep soft-billed birds in better health and condition than others, but what I will say is this, that, after keeping all kinds of British insectivorous birds from the cuckoo down to the tiny golden-crested wren, and having fed them in various ways, the system I have adopted this last ten or twelve years has produced the very best results, so much so that I do not think it necessary to

try and improve upon it, and I hope that what I am about to say with regard to feeding, &c., will prove a help to those who have not been able to keep soft-billed birds successfully, or have been afraid to try them, thinking there would be a great difficulty in keeping them in fine condition.

The foods I shall describe will be found very beneficial to many of the foreign insectivorous birds. All the British insect and fruit-eating species can be kept in fine condition, and I shall put them into groups simply to show the way I advise feeding each group.

No. 1 group.—We will include the Mistlethrush, Fieldfare, Ring Ouzel, Redwing, Blackbird, Songthrush, Starling, Skylark, and Woodlark.

The feeding of these birds is so well known, and they are all fairly hardy, that I do not think it necessary to dwell on these, except that I would like to say these birds should not be fed on their stock food only, although they may appear to do well on it. The thrush family require insect life in the shape of common earthworms, snails, &c., and in April when ripe ivy berries can be found they should have some, also a little fruit in summer, such as ripe strawberries and cherries: the latter they are passionately fond of and will feed upon these in the wild state almost entirely whilst they last. In autumn a bunch of ripe elderberries will be relished by these birds.

Although all these birds are hardy and easy to keep, the change of natural food, in the way of fruit and live insect diet, will put the finishing touch to an otherwise healthy bird.

The woodlark and skylark require, in addition to their daily soft food, some young clover, and as a change a little lettuce chopped fine and are all the better for a little live food such as ants' eggs or mealworms. They do not require a lot of the latter put into their cage at a time, a couple of mealworms occasionally will suffice, but this amount would not be nearly enough for those species which one might term delicate feeders, such as the nightingale, &c.

No. 2 group.—We will take the Woodpecker, the Green, Greater, and Lesser Spotted, and include also the Nuthatch.

The first mentioned species is rather more difficult to cater

for especially in winter. They, in the wild state, live almost entirely upon live ants and their cocoons; in the winter they hunt about the banks under woods, also forage about in meadows, especially where there are large ant hills, and they probe very deeply into these in order to extract the ants. These birds can stand any amount of cold, as long as they are able to find this food, but, although they can stand the cold, yet this species is about the first to die of starvation if snow should fall deeply, on account of their food supply being covered up. In captivity this bird should have a roomy cage, box pattern, with pieces of hard oak bark fixed for them to climb upon; virgin cork for any woodpecker is destroyed very quickly as it is too soft and they will quickly riddle it with their strong bills. The cage must be lined throughout with zinc (which of course can be enamelled), if this is not done the bird will soon make great holes through the cage in no time.

The food should consist of a good well-balanced insectile mixture, made crumbly moist with scalding water; when this food is ready add a piece of York cheese about the size of a walnut, first chopping it finely, adding a little dry biscuit dust to prevent it sticking to the knife; sprinkle this amongst the prepared soft food in the proportion of a couple of tablespoonfuls of soft food to the piece of cheese mentioned. So much for what I term the stock food.

Now live insect diet. As long as live fresh ants' eggs can be got, stir a tablespoonful of these into the prepared food and no other live food is necessary until the end of July. This is the time to begin giving a few mealworms and clean gentles as well as the fresh ants' eggs, so that you will have time to wean the bird gradually from the ants' eggs on to the other live diet before the eggs are over. By October you have another change of live food to fall back on and these are wasp grubs, and they can be had fresh for some time; afterwards they can be had preserved, and in the latter stage they should be shaken out of the comb into a tin and boiled for ten minutes, when they will become quite soft and white and the birds will do well if given some of these each time he is fed.

The greater and lesser spotted woodpecker, especially the latter, requires a plainer diet, otherwise they will be liable to develop fits. Their diet should consist of insectile food and half the quan-

tity of cheese, live insect diet and a fair supply of nuts, such as the Spanish, hazel, monkey nuts, and even beech masts and ripe acorns in the autumn.

Nuthatches will do exceedingly well on the same diet, and, like the common tits, will eat maize.

No 3 group.—Nightingale, Garden Warbler, Blackcap, Redstarts, Reed, Sedge and Willow Warbler, Woodwren, Chiffchaff, Whitethroats, the various Chats, Wryneck, Dartford and Grasshopper Warblers.

I should feed in the following proportions: to every tablespoonful of insectile mixture* when prepared moist but crumbly, add piece of the York cheese, about the size of a cob nut, chopped finely, to this in season add a dessertspoonful of live ants' eggs; this is of course for birds that are really meated off. I should give each bird twice a day also three or four mealworms killed and cut in halves.

No. 4 group.—Long-tailed Tits, Golden-crested Wrens, Tree-creepers and Jenny Wrens.

The same foods will do well, but all mealworms and wasp grubs I always chop into small pieces as these species take their food in small particles.

No. 5 group.—All species of Wagtails and Pipits.

Feeding is the same, in fact it will be noticed that nearly all the birds mentioned I feed very much the same. Of course, such birds as garden warblers and other fruit and berry-eating species, in addition to the diet mentioned they should have, if the owner can procure them in season, privet ivy, elderberries, and in summer raspberries and ripe cherries, the latter can be cut up; the white-heart cherry is a firm fruit and does not stain the perches, &c. with the juice like black ones if the birds throw it about. When the season, in the depth of winter, has settled most of the berries, the banana, not too ripe, can be given.

The foods, then, that I use and call a stock food, consists of a well-balanced insectile mixture. I, of course, use my own make and York cheese chopped finely. This cheese is a white milk cheese and has been used as food for soft-billed birds by others as well as

* Mr. Galloway's insectivorous food "Life" is a most valuable mixture.—ED.

myself, but I can assure the readers of this article that it is one of the finest things that these birds can be fed upon and is greatly superior to hard-boiled egg, and, unlike the latter, can be given without the slightest danger at all times of the year; in addition, I might add that the feeding qualities of this cheese are perfect. It is extremely nourishing, easily digested by the birds, is muscle-forming and not fat-forming. Whilst I am writing this, my gold-crested wrens that are so fond of it are singing quite loudly, considering what tiny mites they are.

Now we come to the question once more of live insect food, and this is very important. Although the birds will do well on the soft food and cheese, it would be wrong to imagine that one need only give a mealworm or other live insect occasionally by way of a treat, and this is where I feel confident birds are lost when they might be living. It is simple to understand when one comes to think the matter out.

The purely insectivorous bird is not so difficult to keep as some might imagine if they are fed in the proper way, at proper times, and on the proper foods.

I am not going to say that if so fed the birds are never going to be attacked by some disease or complaint; everything, even down to plant-life is liable to this, and I shall write an article at some future date* dealing with the various ailments of birds and how a cure can be made almost a certainty of if taken in time.

These insectivorous birds in their wild state would be devouring live insects at intervals, from sunrise to sunset, therefore they should have a fair share of that food each day; to stint a bird in this direction and make him live on the stock food for the most part is a mistake, which is going to bring trouble and the trouble would occur in an aviary where there were several birds, especially in winter, sooner than in a cage where a single bird was kept. A bird in a cage would begin to look soft and would be noticed at once, but in a large aviary the bird or birds suffering for want of extra live food might not be detected so easily.

What may happen in the aviary is this, suppose several soft-billed birds are kept together, they have a few mealworms thrown

* We should like a series.—ED.

down, a bird devours three or more, whilst another eats one; by the time he has swallowed this one the others are all gone, this bird sooner or later looks soft and the simple remedy is to catch him up, put him into a cage and give extra live food and when vigorous enough to stand up for himself put him back in the aviary.

This bother often occurs with new birds put into an aviary, but it can be prevented and the birds saved with very little trouble. Say someone wishes to put a few British or foreign soft-billed birds into an aviary which contains some old stagers who know all the food vessels by heart; when the purchaser receives the birds they should be kept in cages for a couple of days to rest after travelling and get used a little to their fresh surroundings.

Several food vessels should contain food with a fair amount of live food; if mealworms, I should prefer to cut them up. These vessels should be placed in several parts of the aviary: birds that feed on the ground, vessels of food on the ground, others that feed in trees—such as tree-creepers, goldcrests and such like—hang food tins on the branches in two or three places, so that the food will be discovered easily. They should be watched for the first day or so to see that they do really go to feed without being driven by the old occupants. As soon as the birds are familiar with the food places there will be very little to bother about.

In summer time, when live ants' eggs are in season, the birds in an aviary can all get their fair share of live food, for a bowl of soft food, containing a fair proportion of the ants' eggs will ensure all getting the necessary amount of it, and it takes a quarter of the time to feed round; but in winter, when only wasp grubs and mealworms are to be had, I prefer to cut or chop them up small as there is a much better chance of each bird getting its share. Gentles are fairly good as a change, but I should not expect a bird to do well on this as its only kind of live food, at any rate not for any length of time.

There is a proper way to feed with gentles: if they have a blackish mark down the centre they should be kept in dry sawdust for a few days until the dark mark, which is the offensive fluid they have been feeding on, has disappeared, they will then be clean and of a creamy white colour, they are then fit to feed to the birds.

The seasons for live foods as they come round are: June to middle of August, fresh live ants' eggs; this I consider the finest live food of any. September and October, fresh wasp grubs; these must not be used to excess as they are rather fattening. November on to February (if the previous season had been a good one for wasps) we fall back to preserved wasp grubs; these should be shaken out of the comb and boiled for ten minutes, when they will be found quite soft and white and almost look like the fresh ones: there is plenty of sound nourishment in these grubs, but on account of being preserved they are not nearly so fat-forming as the fresh ones, consequently the birds can have more of them.

Mealworms and gentles can be had all the year round. This forms practically all the live foods we are able to obtain in quantity and they are quite sufficient to keep the birds in good trim. Those living in the country can, in the season, find a few caterpillars and other insects, but as they cannot get them in large quantities they come under the heading of tit-bits, which are exceedingly useful and greatly relished by many birds.

The cheese I use is a white milk cheese, made exactly in the same way as that known as York cheese and is called Callomieur cheese, which I get freshly made from the Dairy Institute, a branch of the University College here at Reading; anyone wishing to give this cheese a trial as food for their birds (and they won't regret it) and find any difficulty in obtaining the York cheese, I shall be pleased to forward them the Collomieur cheese.

Fed in the way I have advised, it is wonderful how well birds will keep and how they will stand the cold. I have had nightingales, whitethroats, garden warblers, gold-crested wrens, tree creepers, red-backed shrikes, long-tailed tits, redstarts, blackcaps, yellow wagtails, and others out in my outdoor bird-houses without any artificial heat whatever in winter, and have had to bring in their water dishes and thaw them, sometimes twice in a day, and have not been able to see through the windows all day for frost; in spite of this the birds have all kept in the pink of condition because their food has suited them and has thus enabled the birds to keep up the animal heat in their bodies and so withstand the severe spells of weather. This they could not possibly have survived if they had been out in the wild

state during such weather, simply because they would have been unable to find sufficient food.

The more I go into the matter of suitable food the more certain I am that it is not the cold that would kill the soft-billed birds but it is their supply of foods that is destroyed that kills them. It is astonishing what a lot of cold some of these frail and delicate-looking summer migrants can stand, so long as they get sufficient of the food that perfectly agrees with them. I have used the word delicate, but they are so only in the sense that the form of some species and outline is beautifully and delicately formed. There are however just a few species that the severe cold weather does affect, and these are the wood warbler, grasshopper warbler, reed and sedge warbler, and these I have found it necessary to bring indoors by the middle of November.

(To be continued).

CORRESPONDENCE, NOTES, ETC.

NAME OF SUPPOSED TROUPIAL.

SIR,—I think that Dr. Butler is probably right when he says that my supposed troupials do not belong to that family at all; at the same time I hardly think that they are the common black tanager as he suggests, as this bird has not, so I understand, white wing-coverts. It is possible that they may be a sub-variety. Now that they are at large in an outdoor aviary it is possible to describe their demeanour: this very much resembles that of our robin. The cock carries his tail raised above the back and the wings very much depressed; both birds have a curious habit of flicking the tail. They spend much of their time amongst the thick cover of the laurels and other dense growing shrubs. Unlike the Superb tanager, the only other variety I have kept, they do not care for fruit. I have tried them unsuccessfully with banana and apple, also with "Cecto" and milk sop. They are very keen on mealworms, the hen especially so, and as she is the dominant bird she gets far more than her fair share. Whilst they were caged she permitted her husband to share the same perch with her, but he has now to keep a respectful distance. This seems characteristic of many insectivorous birds. My hen shama used to serve her mate the same way and I finally had to separate them.

I have just got another of the chestnut-coloured ones from Cross, who describes it as a Ruddy starling. I notice that the bases of only the *growing* feathers are white in this bird, so that it is quite likely the entire feather in healthy and full-feathered specimens is chestnut. By the way, I understand

that the black tanager has a curved beak, whilst my birds' beaks are *quite* straight.

WM. SHORE BAILY.

SIR, - I do not know if the following proposal will find favour in the eyes of the Editor and of the members of the Avicultural Society, but as an amateur keeper of a small quantity of birds, principally ornamental waterfowl, I write to ask if it would be possible to have advice given in the magazine on the doctoring of birds, and in the form of a letter on the subject each month. The management of birds during their moult would be a great assistance to the amateur. What to give when a bird has a cold. What to do when they are egg-bound, etc., etc.; also on the proportions of medicines for different sized birds. My one and only panacea for all ills is a dose of castor oil, which I am sure would horrify those of our members who are up to date in bird management.

I make the proposal in all diffidence, but should be delighted if it is thought possible to do anything in this direction. HELEN ATHERLEY.

* * *

As will be seen by Mr. Galloway's kind promise in his invaluable article on feeding insectivorous birds, our members will be assisted later on by his experience in doctoring and nursing.

EDITOR.

Our thanks are due to "Bird-Lore" for the three following extracts.

THAT MOCKINGBIRD.

By JOHN V. FREDERICK, Los Angeles, Calif.

During the last nesting season a mockingbird spent most of his time on a certain chimney. Many times a day he came to the rail of our sleeping-porch to eat suet, along with other mockingbirds and two Audubon warblers.

He often jumped up in the air while singing, only to alight again without ever stopping his song. There came a time when for nearly a week he hardly left the chimney from daylight until dark. His trips to the suet were straight and swift, with no stops along the way. His song was just as continuous as his presence on the chimney, and his vertical flights into the air became more frequent. He would spring up from two to eight feet, drop again, alighting in the middle of one edge of the chimney and run to the north corner, facing the north until the next flight, when he would alight in the middle again, but run to the south corner and face the south.

After a couple of days of this unusual activity, we timed his flights and found that he jumped twenty times in four minutes, or an average of once every twelve seconds, and this would be about the average for the whole day. In a few days, however, this all changed; for he was very busy catching bugs and worms for a new family, and he stopped coming for suet.

Two years ago two mockingbirds would occasionally come around. Last year two pairs spent most of their time around here, and came for suet many times a day. This summer these two pairs raised their families, and a few weeks ago there were eight in our yard at one time.

BIRD PROTECTION.

THE GREAT MCILHENNY PROJECT.

On his baronial estate at Avery Island, Louisiana, lives Edward A. McIlhenny, arctic explorer, big-game hunter, lecturer, and of late years conservationist. Mr. McIlhenny is the man who manufactures the well-known tabasco sauce and other southern delicacies. Incidentally, he owns one of the largest salt-mines in the country.

From the veranda of his residence one may look out over a vast expanse of salt marsh, which extends away and away to the waters of the Gulf of Mexico. It is his work in connection with the preserving of the wild life of these marshes that of late years has brought him prominently to the attention of conservationists. Here is an extended winter range for various species of Ducks and Geese that come out of the North upon the approach of cold weather. Formerly large areas of this region were the haunts of innumerable market-hunters, who in autumn, winter, and early spring, slaughtered the wild-fowl in unbelievable numbers for the markets of New Orleans and of many cities in the Northern States.

In 1910, Mr. McIlhenny and Charles Willis Ward bought, and set aside as a reservation, 57,000 acres of these marshes. They ran the market-hunters out, and established guards to see that they stayed out. They also secured an additional tract of 13,000 acres, and on November 4, 1911, deeded this to the state of Louisiana as a Wild-Life Refuge.

Marsh Island, containing 77,000 acres, was purchased on July 22, 1912, by Mrs. Russell Sage, the matter having been brought to her attention by Mr. McIlhenny. The object of these latter purchases was, of course, to enlarge the region wherein the wild life of the country might be safe from human destroyers. But Mr. McIlhenny was not yet satisfied, and on April 29, 1914, he induced the Rockefeller Foundation to purchase a tract of 86,000 acres adjoining the other refuges. Thus there has been created a vast bird-reserve of about 234,000 acres of Louisiana marshes, the importance of which, especially from the standpoint of preservation of wildfowl, can hardly be over-estimated.

Mr. McIlhenny feels that what has been done should be considered only the beginning of a series of reservations for migratory birds, that should extend northward through the Mississippi Basin and onward to northwestern Canada. The project is a big one, but one that is well worth while. There should likewise be a string of refuges along the Atlantic seaboard and on the Pacific Coast, where protection from gunners may be had for the flocks of Ducks and Geese, as well as for the diminishing shore-birds that annually sweep up and down the coast. If one should doubt whether such an effort is worth while, one need only visit the Louisiana refuges, and witness the evidences of the abundance of wild life to be found there.

In company with Senator George P. McClean, Mr. McIlhenny, Mr. Job, and Messrs. Alexander and Arthur of the Louisiana Conservation Commission, the writer traversed this region in December, 1915. From an observation-blind

we saw at least five thousand Ducks feeding within gun-shot of us, and often would see fully twice this number in the air at one time. We witnessed, one morning on Marsh Island, a flight of probably twenty thousand Blue Geese and Snow Geese. Wilson's Snipe we found in greater numbers than I have ever seen before. Coots were also very abundant. Several wardens provided with power-boats are employed to see that market-hunters, tempted by these sights, do not rig out their decoys and begin the work of slaughter, as they used to do when no protection for the wild-fowl hindered their activity.

A RESCUED ROBIN.

In looking about after a heavy storm in the middle of July, I was attracted by the cry of a mother robin,* which, on seeing me, began circling round, then darting to a place in the muddy road. I followed her, and found one of her babies so buried in a wagon-rut of mud that it was difficult to tell bird from mud, except by a faint pulse. Mother robin flew by my side until we reached the garden. Then she seemed to call all the members of her family and friends, for in a few moments housetops, telephone wires, fences, and trellises were covered with excited robins, bluebirds, and wrens. We put the lump of breathing mud into a bath to soak, which was duly performed in full sight of mother and father robin, relatives, friends and sparrows. When the diminished lump was rinsed, disinfected and dried, there was little left but a few pin-feathers, two closed eyes, and a broken leg. However, it was encouraging to feel a stronger pulse, and to see a huge bill opening for food.

After setting the broken leg, the merry sunshine, a soft bed in a basket, and a worm every second, helped much toward saving a valuable bird-neighbour.

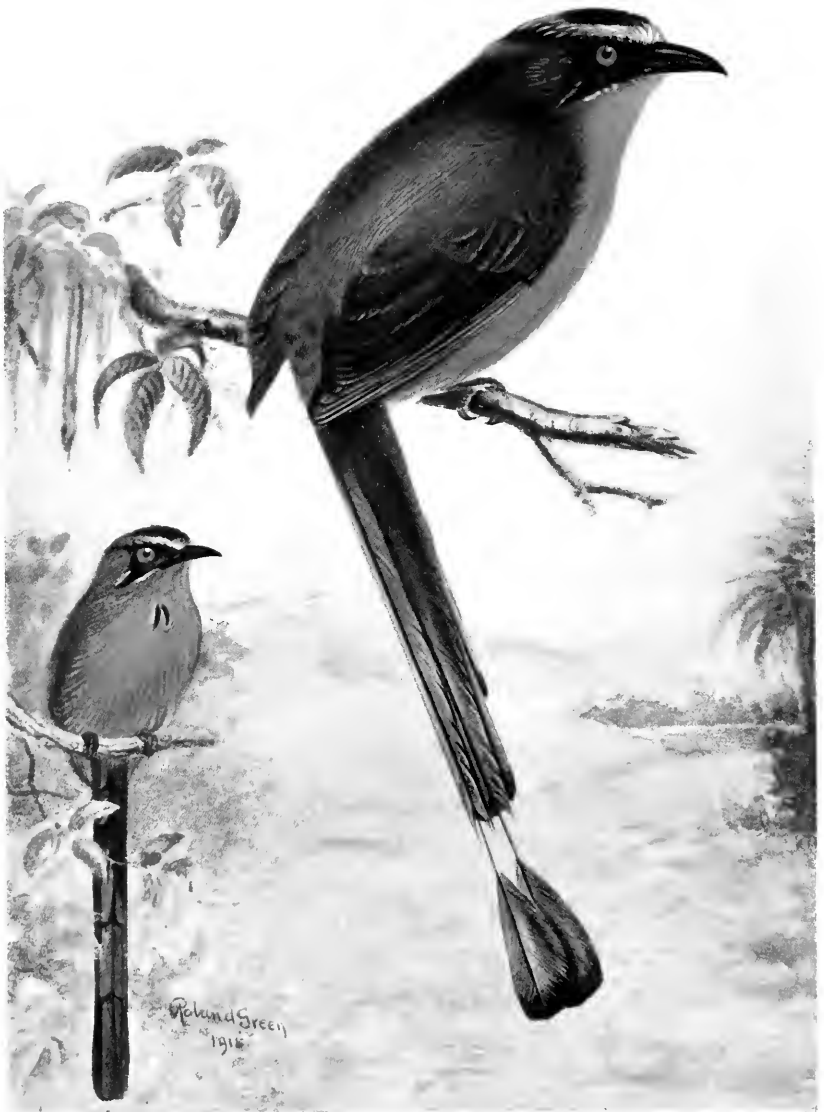
The parents soon instructed me in "pure food for robin culture." They are especially partial to beetles; however, a robin menu includes angle-worms (which I learned to dig with a *sang froid* which I never hoped to possess). Nice juicy caterpillars made up part of their bill-of-fare; as do also grasshoppers, cut-worms, locusts, and snails.

With the indefatigable assistance of the mother, who brought her babe no less than a hundred helpings each day, and myself hard at it (father robin worked only occasionally), the pin-feathers soon developed into a beautifully spotted breast and lovely brown plumage on the back. The broken leg was in splendid form in a fortnight, and, strengthened by daily massage, it was soon perfect. He enjoyed going about the garden perched on my finger, with an extra pressure of the recovered toes to show his appreciation.

Meanwhile a bracket had been made, and our rescued bird (well named "Trouvé Troubadour" by a dear friend) was settled comfortably in his very own house, only a short flight across the garden from his bath. Remember the value of bird-life, and that their future largely depends on our kindness to them.

ROSALIE A. WHITMORE, Omaha, Neb.

* The American robin (*Turdus migratorius*).



THE MOT-MOT, (MOMOTUS MOMOTA).

Hab. — Guiana & N. Brazil.

From a living bird in the possession of Mr. Hubert D. Astley.

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APRIL, 1916.

THE MOTMOT.

Mototus momota.

By HUBERT D. ASTLEY.

Hab. : Guiana and N. Brazil.

In the early summer of 1914, when one still looked upon the Germans as a civilized people, I received from Hamburg a Brazilian Motmot. His plumage was bedraggled, the wing feathers broken and frayed, the tail non-existent save for a few stumps; for all that, he had an attraction about him, besides which there was the anticipatory pleasure of watching his moult, which commenced in the end of July, not being really completed until October. The tail was of course the most interesting point to study. Except for a sparseness and narrowing in the vane near the end, the tail was normal, and not until the feathers were completely grown did the webbing begin to fall off, leaving the two racquets on the two central feathers. I say 'fall off,' because I am almost sure that this is what happened; certainly I never saw the bird attempt to remove any; and I do not believe he can reach it with his bill. The webbing came away in small uneven patches, taking at least a month before the shafts were quite bare, when the bird resembled his coloured portrait which the artist did from him, the figure in the background showing him as he is when the moult is first completed. I use the masculine gender, for I think it is a male bird.

Mr. C. William Beebe has, I believe, come to the conclusion that the motmots do *not* peck off the webbing above the two racquets, although he formerly maintained that this was the case. Perhaps he will write for us on the subject.

The feet of this species are so very small for the size of the bird, that it even finds a difficulty in balancing its body on one foot, whilst scratching the sides of its head, so much so that the movement has to be very rapid, and I have often seen my bird almost overbalance. With a bird of a jay size, which has to have perches to fit the feet of a small passerine bird, such as a nightingale, it can easily be understood that the feet are very small, and moreover dumpy without much claw wherewith to clasp.

I have seen my motmot preen the shorter and outer tail feathers, but never the extremities of the longer ones.

Since the vanes of the two central tail feathers where the webbing eventually falls away are narrower than in the rest of these feathers, and decidedly thinner, it may be supposed that this decomposition is taking place gradually, until in the far future it might come about that motmots will *grow* their racquets with bare shafts above, just as in the case of the racquet-tailed parrots, and also, I presume, the racquet-tailed kingfishers.

Mr. Beebe wrote in "Zoologica" of 15th January, 1910, as follows:—"The motmot is clad in browns and greens, and is a rather "silent, sedentary bird. It would be thoroughly protected on its "perch among green foliage were it not for a constant and violent "jerking of the closed tail from side to side, through an arc of 45 "to 60 degrees."

"The individual under consideration has been in my possession "since the 5th of Sept., 1908, and in general has been in perfect "health, moulting twice, heavily but cleanly, in Sept. of each year. "In early Oct., 1908, the motmot began to preen the web of its "newly-grown rectrices and within a week the denudation was "complete."

Mr. Beebe goes on to say that he plucked out the two racquetted feathers in Jan., 1909, and that on fresh ones growing, "they were trimmed by the bird as before." During the second moult (1909) Mr. Beebe's motmot seems to have been somewhat unwell, and after again plucking out the two longest tail feathers, the fresh ones grew with the sheaths on them, and the folded vane within was not released until the drying sheaths cracked off when they were four inches in length. "When this natural unsheathing

“had proceeded for several days, a portion of the feather appeared disarranged. When the sheath broke from this part, the fact was made plain that the disordered appearance was due to part of the web coming away with the sheath, and the irregular breaking off of the latter made the separate barbs stand out in all directions before being lost.”

And let us take notice of Mr. Beebe's next remarks :—“When the feathers grew still more, it was seen that above the racquets the regular denuded portion of the shaft was as bare AS IF THE MOTMOT HAD STRIPPED IT.”

“This was an interesting result and is probably explained by the low vitality of the bird and the severe strain on its plumage-producing resources, causing a lessened and insufficient nutrition in the development of these long feathers.”

Quite so! but my conviction is that this was merely, owing to the weakness in the bird's blood, a hastened example of the shafts being bared of barbs, which comes about at a slower rate in normal conditions, *and that these barbs fall off, not* being removed by the bird itself any more than it does so with it's feathers, when moulting.

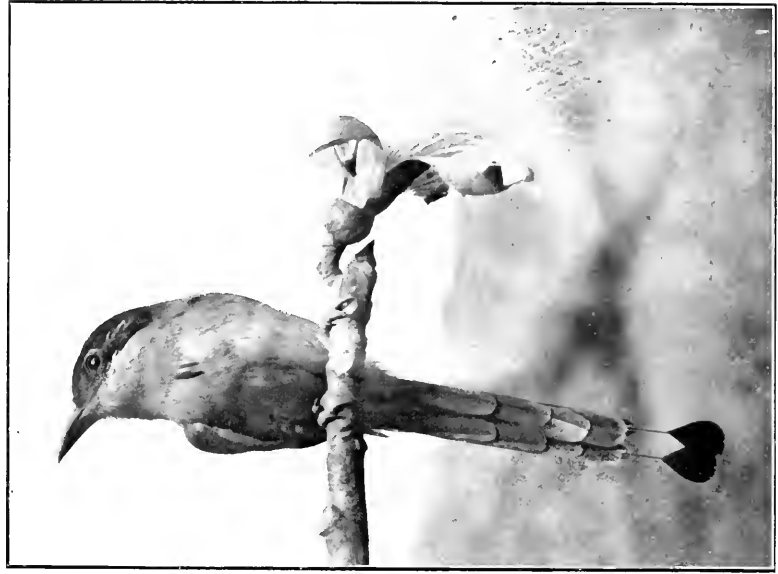
In Mr. Beebe's article in “Zoologica,” there are two very interesting photographs, showing the congenital weakness of the barbs which came away above the racquets, and these photographs being considerably magnified, one can very clearly see how very weak the barbs are. I have said that I have never seen my motmot preen the extremities of his two longest tail feathers; one would have thought that if ever he did so, it would be after a bath, for in the warm weather I syringe him, and he then preens his feathers to dry himself, yet even then I have *never* seen him reach his racquets with his bill.

A motmot should really be kept in an aviary, for in a cage the racquets become worn and frayed after two or three months. I tried my bird in the only aviary I could put him in, for I wouldn't trust him with small birds, but had to remove him, as my pair of black and blue Yucatan jays led him a dance, swooping at him and quite evidently bent upon his destruction; and on making *him* black and blue! Besides which my motmot is a personality of no mean order with a large share of intelligence, so that I like him in the

house. He lives in a long cage with cane bars in the dining parlour, and directly he sees me go to the sideboard commences his curious cry, at the same time swinging his long tail up and round with a circular movement, and then jerking it from one side to the other like the pendulum of a clock, the slightest pause being made when the tail is swung outwards before bringing it back to the other side. When excited at the prospect of a tit-bit of meat, he at the same time utters a curious cry, commencing with two or three clucks. The cry can be imitated by putting the end of the thumb between one's closed lips, rapidly vibrating it and at the same time uttering vocally what may be described as "ou." This cry closely resembles the curious one made by Egyptian women in their native dances. And the motmot also utters one note of the same calibre; a louder "ou" and "woo, pop pop," which has perhaps to do with a call to his mate. Only once have I heard him utter a cry expressive of fear, when I had let him out in a room for exercise, and had been unable to induce him to re-enter his cage. He went under a cupboard and perhaps not knowing that he was going to be caught in the dark corner to which he had retired, was taken unawares when my hand closed on him; then he gave vent to a loud jay-like and raucous screech, but was quickly pacified when he found who his captor was, changing the screech to a more contented cluck and pecking indignantly at my fingers, as much as to say, "You *did* give me a fright, I thought you were at least a cat."

If he gets hold of one's finger with his serrated bill, he can pinch hard, and if one leaves go of him, he will hang on, suspended, so that you can swing his body. Quite a character, he is! and most beautiful in his colouring, with his ruby eye, kingfisher blue on the head, cinnamon underparts, rich green upperparts and blue tail. The motmots are allied to the kingfishers and the rollers. They have, as I have said, the small kingfisher feet, and the head is very roller-like.

As far as I can tell, the flight in wild life would probably be of an undulating character, as in the case of the green woodpecker; but in a confined space, it is quite straight, very strong and rapid. I should imagine the motmots do not take very long flights, although he can move very rapidly. In captivity a motmot will do well on



THE MEXICAN MOTMOT.

Photo. by C. William Beebe.

Adlard & West Newman.

insectivorous food, with meat and fruit mixed in, besides which any insects, beetles, spiders, earthworms, etc. are welcomed as an addition to the menu.

My bird loves a sandbath, and perhaps this is according to its habits in wild life.

Mr. C. William Beebe has written in his most interesting book "Two bird-lovers in Mexico," an account of "The Pendulum of the Barranco," as follows, where he describes the Mexican Motmot, whose portrait is given here, through Mr. Beebe's kindness in sending it to me. "It was in a grove of wild fig-trees that I first saw a Mexican motmot, one of the most interesting and characteristic birds of the 'tierra caliente,' and perhaps the most beautifully coloured of all birds we saw in Mexico. One's first impression of a motmot, as seen at a distance, is of a large-headed brown and greenish bird, with a broad bar of black on the head." [Mr. Beebe is writing of a different species to my bird. H.D.A.] "We were fortunate enough to be able to study one of these birds in our very camp. With a lucky shot I stunned one with a small-calibre shot-cartridge. The bird soon recovered and remained about the camp, retaining its full liberty, feeding upon scraps of meat, or occasionally catching insects for itself. Its favourite perch was a branch of flowering clavilliña, to which one end of the ridge-pole of our tent was tied. Here, day after day, it unconsciously posed before the camera, the only matter of regret being that its exquisite colouring, which shewed so beautifully on the ground glass, must be lost in the negative."

The tree is the Cotton Tree (*Bombax palmeri*), which is of good size, and whose oblong flowers burst open, revealing a radiating tassel of long silky-white stamens, five or six inches in length.

"These trees love to grow," Mr. Beebe adds, "on the very brink of the barrancos, their branches reaching far out over the sheer cliffs."

"The bark peels off in long fluttering red streamers, thin and transparent, and the rustling of these in the slightest breath of air is a very characteristic sound of the country. The flowers are fragrant, attracting hosts of insects, which in their turn draw the birds."

* * * * *

I have discovered that my motmot has a distinct affection for me. I was away from home for a week, and on my return, directly I approached his cage, he jumped off a perch on to the floor, threw up his tail, inclined his head, slightly inflating his throat, and uttering quite loudly 'oup-oup-oup.' At the same time the pupils of the eyes contracted, which caused the brilliant ruby colour to flash and scintillate. He repeated this every time I went near him, bowing his head slightly with a slow movement, to be at once followed by his rather Hoopoe-like notes.

I let him out of his cage. He flew on to the oaken sill of a window, and even as he alighted, twisted round and erected his tail hopping a few paces. On approaching him, flash went his ruby eyes, down went his head in a dignified bow, the vocal sac was distended, and again—'oup—oup—oup,' uttered very rapidly, with the *sonorous* quality of the cuckoo's notes. It seems to me to be the middle C on the keys of a pianoforte. He's *very* attractive!

And, furthermore, a proof of his intelligence came to the fore. There are usually six or seven Pekingese dogs in the house, of whom, now he knows them, he is not merely not afraid, but if his cage is on the lawn in fine weather, and any of the dogs put their noses near the bars, he will hop down and try to peek them. One day, however, a new Pekingese was added to the family circle, of a different colour to the rest; a rich grey "brindle." We were at luncheon, when suddenly the motmot became very frightened, dashing about his cage. The new Pekingese was walking about close beneath the table on which the cage was placed; and it was very evident that the bird distinguished the colour and individuality of the dog, the others being either red or particoloured. In a day or two, the motmot became reconciled to what he thought to be an enemy. It was *undoubtedly* the colour that caused him to distinguish this particular Pekingese from the others; another proof that the varied hues of so many male birds can be appreciated by the females, indeed if it were not so, the display of the males would be futile and meaningless, when dancing, quivering ornamental plumes, spreading feathers to exhibit colours to the best advantage, and so on. Watch a male golden pheasant pirouetting round a female,

bringing all his gorgeous colouring to the fore: is that mere vigour without an object beyond it?

* * * * * *

There are many species of Motmots. In addition to two in each case of *Urospatha* and *Prionornis*, and one of *Baryphthengus*, all of which five species are called Motmots: there are at least eleven of the family of *Momotus*.

<i>M. momota</i>	Common Motmot	Guiana, N. Brazil
<i>M. parensis</i>	Pará Motmot	N.E. Brazil
<i>M. venezuelæ</i>	Venezuelan Motmot	Venezuela
<i>M. subrufescens</i>	Columbian Motmot (Barranquero)	Columbia
<i>M. ignobilis</i>	Obscure Motmot	East Puru, E. Ecuador Venezuela
<i>M. natteri</i>	Natterer's Motmot	Bolivi, Brazil, E. Puru
<i>M. microstephanus</i>	Sclater's Motmot	Columbia, Ecuador
<i>M. argenticinctus</i>	Silver-banded Motmot	Ecuador
<i>M. æquatorialis</i>	Equatorial Motmot	Ecuador, Columbia
<i>M. chlorolaemus</i>	Green-throated Motmot	Central and East Peru
<i>M. bahamensis</i>	Swainson's Motmot	Trinidad, Tobago

Does the last species occur on Little Tobago? Perhaps Sir William Ingram could inform us. It has not been mentioned in the reports as to birds found there by Sir William's watcher in connection with the Paradise birds liberated on the island.

MORE NOTES ON NEW HUMMING-BIRDS.

By A FRENCH MEMBER.

It is, I think, an English saying that three is a lucky number, that if after two failures a man still perseveres in a certain scheme the third time is likely to prove successful. Well, since that journey to Guadelupe, undertaken in February 1914, which I related in our magazine and which resulted, as may be remembered, in the importation of three species of humming-birds, twice did I set myself to the task of obtaining other varieties of this charming and unique tribe of birds, by having them embarked on a vessel, with every necessary direction given to an attendant for their care on the

voyage: twice disappointment ensued. The first time, if my memory serves me right, none at all lived beyond the Azores. The second lot, it seems, fared a little better; some half-a-dozen or more survived as far as Santander—the last call of the ship before the French ports—and would no doubt have reached our shores but for the sudden outbreak of the present war, which became known on board at that time and spelled the doom of my ill-fated consignment. I never heard but a hazy, probably not over-truthful account of the tragedy; but my mind numbers those little captives amongst the victims of the war. It may be on account of these two failures, also owing to the increased difficulties and risks of such shipments in the present circumstances, that my intention of a third attempt, when known amongst aviculturists, in June 1915, roused but a mild interest. The Voice of Wisdom—ever ready to offer advice where least wanted—rose and condemned or pitied such ventures. *Of course* humming-birds could not travel unless accompanied by a skilled attendant, personally experienced in their treatment and many needs. *Of course*, the same unhappy fate awaited this lot that had befallen the others. Such was the encouragement drummed into my ears. To this opposition I partly owe the success of venture number three. Indeed the preceding ones had been planned and arranged carefully enough, and, as we thought, with sufficient thoroughness to ensure the birds' welfare on their perilous journey; but *this* time there was *not* going to be a mishap. Each precaution must be weighed out in advance, and no minute detail neglected for ill-chance to seize upon and spoil everything once more. The *Colibris* must be obtained, taken across the ocean and landed in good order—and there was an end of it.

By what means this object was achieved I do not propose to relate.* I shall be content with stating that by the great and untiring kindness of a friend in Venezuela, a large number and a wonderful variety of humming-birds were procured. One of the best rooms on a French steamer was prepared for their reception; written instructions were given to two intelligent members of the ship's crew, baited with the promise of a reward proportioned to the results; and, in spite of sages and warnings, amidst floating-

* Yet a relation of these facts would be very helpful to other aviculturists.—ED.

mines, torpedos, submarines, and other commodities of up-to-date sea-travel, the liner carrying the tiny creatures sailed safely into harbour on August 27th, 1915, landing upon the soil some 25 *Colibris*, mostly in excellent condition. The usual wash, rest, good food and *plenty* of heat worked the usual wonders; after the sad but inevitable decease of the weakly specimens I found myself the owner of the largest and most varied collection of humming-birds ever brought alive to Europe. A still more complete success might have been attained, had I only been told, instead of all the trash and nonsense one hears from all sources concerning these apparently mysterious little birds, that it is customary for Venezuelan ones to moult towards the autumn. Quite a number of them arrived in the middle of that ever delicate operation, and of these several succumbed. It would have been a simple matter to arrange for the consignment to be sent earlier in the season, when after landing they would have had a better chance to rally from the fatigues of their journey before entering upon such a critical time. On the other hand, as a very large proportion of the *Colibris* turned out to be young ones, babies in my opinion not many weeks old at the time of their capture, this serious disadvantage was to some extent made up by the interest attaching to the study of their development and by the greater adaptability of immature age. And this brings me to mention that whether or not the assertion is correct that humming-birds are ephemeral beings, living, like the rose of the poet,

“ l'espace d'un matin,”

it is *not* borne out by the decidedly slow process of their assumption of plumage.

Nearly five months have elapsed since the arrival of these, and of two Mangos (*Trochilus mango*) who reached me in the long-clothes stage of their existence; only one just begins to show traces of the characteristic blue of the male round his cheeks and neck, whilst the other, slightly more advanced, still has a great deal of the white garb of young age on his under parts. Further, of three ruby topaz (*Chrysolampis elatus* = *Moschitus*), all babies, one has scarcely added more than the least touch of gold to a few jewelled feathers among the grays of his tiny body; the two others, of which one has become in England the possession of a friend, have remained

to this day totally devoid of colour. It is said *Chrysolampis elatus* dons his shining livery without a moult. Whether this belief is founded on fact, and if so how much longer will elapse before the infants I have of this species—assuming they happen to be males—put on the cloth of gold and the crown of rubies that enrich the adult, it is so far impossible to foretell.

* * *

Before going on with a little more detail to the various genera imported, I should like to set down here a few improvements as regards the treatment of *Colibris*, which a careful study of their needs has taught me during a period of twenty-two months. I mentioned, ruefully enough, in my last articles on this subject, one of my initial blunders, namely, the utter failure of the attempt at keeping several together either in aviaries or in large cages. A second mistake—also dating back to the early days of the 1914 importation—cost I fear some of the birds their life: they were *not* kept sufficiently warm. Often at night the thermometer in the room would sink to 17° or even below; whilst 18° to 19° was the average maintained in the daytime. I am now of opinion that, at least during the first year of their European life, humming-birds require a much higher degree of heat, and that a painful and most obstinate disease of the bowels, which they are most subject to, and do not easily recover from, is largely brought on by an irregular or insufficient temperature. Since the advent of the present winter, a uniform heat of 22° to 23° has been kept up, with far better results. Another change, which I am also inclined to consider beneficial, has been effected in the diet of the birds. The Mellin's food, which formerly used to be dissolved with the other ingredients in the boiling water, is strengthened and varied by the admixture of an equal quantity of fresh beef, reduced into an impalpable powder by a slow process of cooking, pounding, and drying. Enough of the meat is prepared to fill a glass jar, from which the daily supply can be taken and added to the Mellin's food according to needs; if properly dried there is no fear of its going bad, at any rate for a fortnight or so. Last, but not least, the *Colibris* now get insects all the year round, by the following simple method, which I regret I only learnt a few months ago: in a bowl about fifteen inches deep,

six inches in diameter, put a good amount of mashed potatoes, boiled without any seasoning whatever—enough to make a good foundation—then a couple of bananas or more, rotten to the point of pulpiness, cut into slices and spread about on top of the potato meal. Pour a few spoonfuls of claret into the jars, in sufficient quantity to moisten the mixture and to prevent it from becoming mouldy: then fasten up the top with a piece of muslin and string, leaving a small hole in the material which a pinch of cotton wool can fill up. All is now ready for the introduction of the breeders: tiny flies of the genus *Drosophilæ*, which I hear English members may obtain in London from the Spiders' House at the Zoological Gardens. The bowls once prepared should be left in a *very* warm room for three weeks or so, after which the larvæ will appear, giving birth in turn to an innumerable progeny. At this stage all that the flies will require is feeding afresh, once or twice a week, with more fruit and just a little wine (red) added to the old stuff. If the above recipe is strictly adhered to, and if care is taken never to use up any one jar to the point of exhaustion—which means leaving in each the minimum of fifteen to twenty insects necessary for reproduction—the breeding will continue without a break, nor will a sudden shortage occur. To offer this live food to the humming-birds' imagination will suggest many ways: mine consists in simply removing the cotton wool stopper, after which I slide the bowl into the cage through the door, or where the latter is not wide enough, I bring the cage close to the light, placing the jar on the opposite or darker side so that it touches the bars: the insects obeying Nature's prompting, which is to seek the light, will fly across the enemy's domain, or I should say will endeavour to do so, for not many succeed. Many a happy hour have I spent marvelling at the humming-birds' antics, as they caper, dance, hover, twirl, dart, and whiz about within their little house, in their efforts to snap at their prey, which is almost always caught in mid-air, and but very rarely from the bars or twigs.

* * *

Amongst the newly-landed *Colibris* we found a few which even my learned friend Monsieur E. Simon—our greatest authority on this branch of ornithology—could not identify with any degree

of certainty. One was a brownish bird, faintly streaked with olive markings on the back, chocolate coloured beneath, for all the world like a big moth. Only one arrived, unluckily tailless and heavily in the moult. At first we believed him to be *Leucippus fallax*, a decidedly rare bird, haunting mangrove swamps, the denizen of fever-stricken localities; but, for several conclusive reasons, one of which is the scarcity of such marshes where the catching was effected, we ultimately discarded this classification altogether. More probably the young of some other genus, the early plumage of which is as yet unknown. Another puzzle assumed the shape of two small fellows, grayish above, in size about equal to the immature ruby-topaz: but their throat and chest were *pink*. As neither the simili-Fallax nor the pseudo-Topaz survived more than a few weeks, this double riddle must remain unsolved, unless I am so happy as to discover its key in my next consignment.

Trochilus mango. This well-known species hardly calls for a lengthy description; it is a fair-sized bird for a hummer, naturally slim and sleek, with a thin slender neck and nearly straight beak. In the adult the whole of the back is a vivid green, the chest and belly a beautiful deep black with a line of bright sapphire running down the sides from the neck downwards. Tail rounded and violet underneath. The young differ in having the entire lower parts white, but divided by a tortuous streak of black. As the bird gains in age this line is seen to widen out by degrees until *all* the white disappears, merging as it were into the ebony black, whilst a blue spot, faintly shining by the throat, increases in size and lustre as it creeps down towards the chest. A hardy species, taking easily to the artificial food, graceful in its attitudes and, for a *Colibris*, strangely loquacious; besides the incessant chattering cackle that accompanies all its actions or expresses its emotions, it boasts of a little song, more strange than beautiful, which sounds exactly like the tearing of silk.

Egyrtria fimbriata. Whilst of the above several individuals were present in the consignment, only one was found of this kind. It is an adult, and has, at the time of writing, embarked on a slow moult. Much smaller than *Trochilus mango*, incredibly swift on the wing and most eager for flies. Upper parts green, chest and abdomen mottled white with a patch of flashing emerald on both

sides. This bird somewhat puzzled us at first by the unusual vivid colouring of his beak, which is of a lovely coral shade. Out of dozens of skins observed, not one showed this peculiarity, nor is it mentioned in Ornithological works, where the bill of *Æ. fimbriata* is described as black or brownish black, certainly never carmine. No doubt discolouration speedily follows upon death, and only skins have to this day furnished the material for study. *Fimbriata* is, or thinks himself, quite an accomplished songster; he has a little melody, which he practices for hours together, preferably of a morning; a faint chirp, followed by a long, soft, reedy trill in the treble. He is a great favourite, in a collection where almost each item is a pet, and this not only for his funny, winning little ways, his vivacity, his intelligence, but also because he escaped from the very jaws of death. When upon arrival he was taken out of the big travelling box he shared with many others, to be let loose in a nice all-wire cage by himself, I thought I had never in all my past experience seen a creature so wild; he would dash about at lightning speed, throwing himself madly against the sides, panting and shivering with fright: such was his anguish that every time one had to open the door of his house and insert the hand, he fell backwards on the floor in a fainting fit. Each day I expected to pick him up dead; but no, patience and kindness slowly dispelled his terrors, he became gentle, confiding, even friendly. But scarcely had he grown reconciled to human presence when, for no cause I can conceive, he contracted quite suddenly that mysterious ailment of the bowels previously alluded to. This again took weeks to cure; however he has now overcome both his wildness and the other trouble, and certainly seems one of the happiest members of my little family. He has developed a quaint habit when he thinks his tail is in need of a wash, of flying on to the wires above his hanging bath, then, clinging there and bending his body backwards, of dipping his lower feathers in the water. This original performance or hip-bath is wound up with the customary toilet, as indulged in by all humming-birds, who, afraid to trust their tiny legs to the dreaded depths of a tin, prudently content themselves with sitting on its inner edge, plunging in their head and neck, all the while frantically flapping their wings about, in the hope of causing the liquid to run down their back.

Egyrtia milleri. The smallest bird of the whole consignment; smaller I think than my late lamented *Bellona*, truly no bigger than a bumble-bee. Greenish on top, with brilliant turquoise blue head and traces of the same lovely shade by the throat, which is whitish. Not a common species, leastways not in that particular part of Central America, where its habitat is mostly Colombia. One arrived looking lively and well, only to fall shortly into an ill-timed moult, which, in spite of all nursing, brought on his death after two months or so of a hopeless struggle. I found his little body literally covered and choked with the new quills.

Sanzerottea felici. Another charming genus; almost, if not quite as tiny as the above, but wearing a uniform dress of the most intense emerald green, shot in places with golden reflections and varied only by the steel-blue tail and by the reddish shading of the rump. Several individuals arrived in good condition; one of these, perhaps the most brilliant, has become so tame that if I hold out a small stick to him he will at once buzz on to it and quietly proceed to preen or shake out his shining feathers, with a satisfied air of one who knows a clever trick and enjoys its performance. Very fond of flies and like *Æ. fimbriata* a demon of the air for quickness of flight.

Chrysolampis elatus = (*Moschitus*). This species, also one of the smaller *Colibris*, is so miraculously lovely that, not having at my disposal the painted prose of a Wilde or the colour music of an Albeniz, * I will attempt no closer detailing of its many beauties than to say that a glowing ruby forms its crest, a golden topaz, iridescent with green fires, sparkles on its throat, both colours so resplendent that the whole of this tiny sprite, when it dances in the rays in the sun, appears like a living, leaping flame, flashing forth as it were a light of its own; a deep, silky maroon adorns the upperparts; the tail, which is rich brown tipped with black, spreads itself out like a fan whenever the bird is buzzing about, a prey to some excitement, or if he wishes to rest after a bath, sunning himself upon a favourite twig. Although a sadly delicate species, quite a number were safely landed, amongst them several babies of uncertain sex and a young cock, already mentioned in these pages, showing on his chest a single golden spot. A marvellous

* Vide "L'Oiseau de Feu."

little male, fully adult, after suffering for two months with that strange malady of the bowels which I despair to prevent but sometimes can cure, and which until I know better I have baptized enteritis, has now completely recovered, and is the gem of a brilliant series, slim and tight as any wild bird can well be.

Eulampis jugularis. As I gave in my articles of the past year a long description of these *Colibris*, imported by us from Guadeloupe nearly two years ago, I won't weary my readers with a repetition. As time goes by and moult succeeds moult, the birds seem to gain steadily in strength and condition. None are more greedy for flies. They have grown quite hardy and, last summer, up to the date of the new humming-birds' arrival, lived for weeks day and night by the open window.

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Though I have no doubt taken up my full share of this paper and can fancy our Editor sending for the dreaded scissors of censure, perhaps it is not out of place to give here in a few words the year's record of my sunbirds. Two malachites (*Nectarinia fumosa*) are now in the glory of their nuptial dress, one of them after wavering for months, during the fine season, between the grays of winter plumage and the half-donned green silks of summer clothing. The same may be said at the present moment of two lesser double-collared sunbirds (*Cinnyris chalybeus*), both in perfect health but showing amongst the green feathers of their back many spots of gray, which are slow in disappearing. Both have been in my possession some three years.

A purple sunbird (*Arachnechthra asiatica*) has just completed his first moult into the violets of maturity, and shares with a lovely little amethyst-rumped (*Arachnechthra zeylonica*) the privilege of rivalling my best humming-birds for condition.

My wedge-tailed sunbird (*Anthrobaphes violacea*) has successfully undergone his second moult since he came over in October 1914. He has learned to take any small soft-skinned insects from my fingers and devours mealworms, provided they are decapitated before they are served: he will then suck out the whole of the inside, inserting his long thin tongue into the hole as into a fragrant flower, until only the empty shell remains in my hand.

And now for some mishaps. With that radiant species inhabiting Transvaal (*Cinnyris mariquensis*), truth compels me once more to confess to failure. Out of four individuals received in October 1914, two died within a few months, one survived until the summer, and the fourth, whom I got over his moult after almost incredible pains, suddenly became a prey to brain disease, and gradually succumbed to it after less than a year's life in captivity. Certainly the most disappointing birds I have handled yet, possibly owing to the great difficulty of obtaining creatures whose home is so remote inland, that the endless journey to the coast and subsequent voyage across the ocean, even with the help of a temporary rest at a kind friend's home between the two ordeals, weaken their naturally delicate constitution to such a point that a complete rally becomes all but impossible.

My one specimen of *Æthopyga nepalensis*, obtained through a friend in England in July 1914, underwent a fairly good moult and looked like doing well, in spite of a bare neck which stubbornly refused to grow feathers until some three or four months ago, but just as his head was at last getting covered with quills and I was rejoicing at this reward of twelve months' patient wait, he died in a fit.

Æthopyga saturata, I am thankful to state, has done better and moulted beautifully, though indeed not easily, last year about this time; he is now in the throes of this operation again. Another extremely delicate genus I fear: this is the more to be regretted because with its lovely blue and black plumage, its long tail, its sweet, strangely passionate little song and instinctive tameness, it is also one of the most charming.

To finish these notes with a contrast to this frail little fellow, *Cinnyris amethystinus*, a very robust species, which has just shed his old garb and looks once more very pleased with his sombre yet shining new dress.

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Below will be found, such as it is, the musical rendering of some of the sunbirds' phases or calls. Partly because in the case of many genera—for instance, *Nectarinia famosa*—it is impossible to convey an idea of the song, which, though clear and pretty, is not of a musical quality; partly on account of the confusion of

sound reigning in a room, which, in addition to the melodies of many sunbirds, rings throughout the day with the wild howls of Paradise birds, my laudable attempt has only yielded the poor results that follow. Let us fondly hope that some other musical member of our Society, working under more favourable conditions, may interest himself in this effort, and so far as art can imitate Nature, crown a delicate task with a better success.

Æ. nepalensis.



C. amethystinus.



C. mariquensis.



Æ. saturata.



WHISKEY JACK AND ANOTHER.

By AUBYN TREVOR-BATTYE.

Where was it—an attractive description lately read of a bird that was probably *Perisoreus canadensis*, the Canadian Jay? This bird is known all through the forests as Whiskey Jack. (Wiscachan is the Indian name, which became to the settlers Whiskey John, and so, in easy transition, Whiskey Jack).

It is a bad bird when one is tracking moose; for then its inquisitiveness and its warning cry may utterly defeat a long and

patient effort. But if it shares with our own jay this demerit, it has gentler claims that more than make it up. It is a most lovable little bird, so much so that the writer who a score of times might almost have caught one with his hand, so to speak, has yet but a single skin in his collection. You cannot kill your most confiding friends, and life in the great forests of the North West would really be a different thing without Whiskey Jack. Worn out with foot-slogging hour after hour through the muskegs, weary with picking your slow way in silence and suspense through tracts of fallen timber, where though the trees lie like spilkins you must not snap a twig, no sooner have you fired at last your shot, and sat down to admire your quarry—or to mourn its disappearance, as the case may be—than Whiskey Jack turns up. When you stop to munch a hard-earned piece of bread and cheese, Whiskey Jack is there to help you, and will come at last to take it from your fingers. He does not do that at once of course: you must throw the food a little nearer, a little nearer, must move deliberately and not in jerks, for all this time he is summing you up. At last he determines that you are all but as senseless as the grey log on which you sit, and then, at the psychological moment, as the journalists say, he comes in and “takes the biscuit” with a little dart.

Now there are but two birds belonging to the genus of *Perisoreus**; one in the New World one in the Old; the latter is *P. infaustus*, the Siberian jay. It is not a little curious that both have the same habits, habits that distinguish them in character—as they are separated in form—from *Garrulus*; for this genus is not companionable but quite the opposite—very “fly.”

The writer cannot recall an instance of this extreme friendliness on the part of the Siberian jay in Norway or Sweden, where the bird is common enough, and where they go through the trees in discordant parties; but in the immense forests that border on the tundras of Arctic Russia the bird is every bit as friendly as

* Newton points out (“Dictionary of Birds,” p. 468) that Bonaparte’s name of *Perisoreus* was pre-dated by *Dysornithia* of Swainson. This latter term would mean a bird of ill omen. The origin of *Perisoreus* is not so clear, unless it be mal-derived from *περισπένω* to heap up all round. If so it would refer to the bird’s practice of storing up its food. Newton (quoting Swainson and Richards) gives the Cree name as “Whiskæ-shawneesh.” My own Cree hunter always called it “Wiseachan,” which is much the same as “Whiskæ-shawn.”

Whiskey Jack. When you have been sitting since early morning behind four fast reindeer, skirting the thin edge of the pine trees, and the cold is great, and about half-way up your tibia razors seem to be sawing at the bone, and you pull the team round in a half-circle, unless you can frame the proper throaty word for "woa!"—the writer never could—and tumble off the sleigh into the snow to find you cannot stand, then indeed Jack Moujik's voice sounds friendly as he draws up through the trees, and you have cause to bless him, call him by what name you please. By the time the brick tea is steaming in the billy the relations established are already of the friendliest and he is ready to share your hard-baked slabs of bread.

I do not remember to have seen a Whiskey Jack in captivity, it would be a most engaging pet. Mr. Meade-Waldo has however described for us his delightful Siberian jay; though it is not every bird-keeper who has the devotion needed to provide so varied a bill of fare as he describes.

A MORNING IN WINTER.

By HUBERT D. ASTLEY.

The end of February, Primulas in full colour, pear blossom almost opening, daffodils budding, and the *Pyrus japonica* in scarlet bloom, so mild has the winter been. Yet the winds and the gales, positive hurricanes, seem to have been blowing without cessation for two full months. And now the clerk of the weather has a bad bilious attack, shewing his tongue unhealthily yellow! A N.E. gale, and then the snow whirling and scurrying, thawing a bit on the ground, but oh how cold it must be up above in aeroplane altitudes! The first look from bedroom windows is horrible, disheartening, depressing! the more so because of one's birds, and the wild birds too, for they must be fed. Once out of doors one is too busy to think of anything else. A bowl of hot melox in hand, I hurry round about the house, scattering some here and there in sheltered corners, or where the snow has been swept away on paved paths. Robins, starlings, thrushes and blackbirds are lopping about, puffed out, and then come blue tits, a solitary pied wagtail in spring colours, one or two hedge accentors, a couple of great tits, and of course

sparrows, whilst out in an orchard one poor redpoll is searching for seeds on the stalks of last year which emerge from the snow level. Then, broom in hand, I sweep a space first in one meadow and then in another for the cranes to feed on. Maize and bread, and I have to stand by a bit to keep off rooks and jackdaws, which directly my back is turned, flop down and quickly devour what they can find. Then I'm off to the aviaries, again to sweep on the lawn surrounding them, because there the palm doves come to feed and a few crested doves, as well as my Modena pigeons.

I'm anxious about the doves, so so few put in an appearance, and they can't find food anywhere else. For three days now I have seen not more than half a dozen, instead of five or seven and twenty. I whistle and scatter grain, and an hour after, the swept ground is snow-covered. Luckily it isn't freezing hard, and the birds can find plenty of water to drink, and the flamingoes and ducks on ponds and moat are none the worse, especially as they receive an extra meal. But how unnatural the flamingoes look, like a bevy of girls in pink evening frocks, who have had to walk home from a party, holding their skirts very high indeed: they look cold, but are really all right, and when the grain is thrown into the shallow water, all come forward; gagging, grunting, squabbling, and duelling, with long writhing necks and erected dorsal plumes: and whilst they thus waste precious time, ducks are taking advantage, dibbling, devouring and diving, (I doubt if such alliteration is good!) There is a most magnificent male falcated duck amongst them, with a head and crest of burnished violet and coppery-brown, his elongated feathers on the back almost covering the tail. A very handsome species. But it isn't a morning for standing still to admire mandarins and summer ducks, Bahamas and shelduck, pochard, golden eyes and the rest, even if one had the time. There is the poultry to be seen to, and poor February chicks to cosset, and one's own breakfast to think of. The aviary birds seem all right, for they have slept in warmed shelters, with food awaiting them on awaking. The red cardinals make a flash of colour against the snowy background, but almost too much so in these times; involuntarily one thinks of blood upon the snow! and one thinks of it still more when one returns indoors to find the daily paper on the table!!

NESTING HABITS OF THE
MISTLETOE - BIRD.*Dicaeum hirundinaceum.*

By S. A. LAWRENCE, R.A.O.U. and R. T. LITTLEJOHNS, R.A.O.U.,
Melbourne (Vic.)

[The following interesting account is taken from "The Emu." We regret we cannot reproduce the excellent photographs accompanying it].

During October and November, 1914, we had an opportunity, for the first time, of observing the nesting habits of the Mistletoe-bird (*Dicaeum hirundinaceum*). Previously we had seen the bird only on a few occasions, and never at close quarters. The nest we had under notice, unfortunately, could not be visited during the period of incubation, but we spent a good deal of time photographing and taking notes when the young birds appeared.

On 4th October, while photographing at the nest of a Yellow-breasted Whistler (*Pachycephala gutturalis*) on a timbered hillside at Ferntree Gully, Victoria, we noticed a male Mistletoe-bird attacking a White-eye (*Zosterops dorsalis*) with such persistence as to indicate that the former was nesting. Several times the White-eye returned to a native cherry tree (*Exocarpus cupressiformis*) and each time was angrily driven away. Finally, both birds were lost to sight among the trees. As a photograph of the *Dicaeum* had long been desired, we kept a very sharp look-out. Soon the female Mistletoe-bird arrived with nesting material, and flew straight to a sapling a few yards from the disputed cherry tree. On following her to the sapling, much to our delight we discovered the purse-like nest suspended from a horizontal branch about 10 feet from the ground. We watched from a short distance while the female made two or three more visits. The nest was very elastic, and bulged in an alarming manner as the bird turned about inside, arranging the fresh material. A closer inspection later showed that it was almost completed, and was much larger than descriptions had led us to believe was usual with nests of the kind. Certainly, it was much larger than the specimen now in the Melbourne Museum. The nest, which faced the north, was built of sheep's wool and the woolly substance obtained from the under side of the leaves of the blanket-wood tree (*Bedfordia salicina*). Although we remained at the spot

for a considerable time longer, the bird did not again return, and we were rather concerned as to whether we had caused her to desert. The male appeared to take no part in the nest-building, but confined his attention to clearing his domain of feathered intruders.

It was not till 22nd October that we were again able to visit the hill. We were relieved to find that the nest had survived the severe gales which had been experienced in the interim, and that three young birds had been hatched some few days before. In the short period available for observation on this occasion, the female made several visits with food at intervals of, roughly, two minutes. She invariably flew into the sapling a few feet above it before clinging to the front of the nest to feed the young. As we were only a short distance away, we were able to see that the food consisted of insects only. The male was not seen at all, and the wariness of the female did not leave us very hopeful as to the possibility of obtaining photographs. A few days later we were early on the spot, provided with fencing rail and string for the erection of a staging on which to set the camera. The primitive nature of this structure appeared rather to amuse Mr. Charles Barrett, who arrived later in the day. However, it served its purpose, and eventually we had the cameras focussed on the nest. As we had expected, the birds were somewhat alarmed, and, though the female several times came to within a couple of feet of the nest, a few hours elapsed ere it summoned sufficient courage to brave the camera. When it had satisfied itself, after a great deal of hovering and hesitation, that the strange-looking object was harmless, the bird finally clung to the front of the nest in the desired position. Our difficulties, however, were not even now at an end, as, although, from this onwards, the female visited the nest frequently, her lightning-like movements prevented us from making a satisfactory exposure. On her arrival, she fed the young with her head inside the nest, and left immediately.

We had to resort to a plan usually adopted by us in the case of closed nests. The opening was blocked up with a piece of paper, thus preventing the young birds being fed. The parent was so taken aback on her return that she remained for several seconds in a suitable position. She did not at all appreciate the altered aspect of her home, and clung to the front, scolding harshly. Mr. Barrett

and ourselves were then able to expose several plates. The male bird was too wary to be photographed, and at this time we were of the opinion that it took no part whatever in feeding the young. On two or three occasions during the day the male came to within a few feet of the nest, but brought no food. We left the hillside that evening fairly satisfied with our day's result, but more than ever determined to obtain pictures of the male if possible.

A week later we were again at the nest, notwithstanding unfavourable weather. The young birds, which had grown considerably, called lustily in answer to their parents. They were also strong enough to cause a good deal of trouble by pushing the piece of paper from the entrance of the nest. On this occasion, much to our surprise and satisfaction, the male fed the fledgelings as often as the female did, thus completely upsetting our former conclusions. The male very quickly became accustomed to the camera, but, instead of clinging to the front of the nest, persisted in hanging head downward from the branch above. For some time at a stretch each bird brought food to the nest on an average once in about four minutes. There were occasions, when the brood was evidently well satisfied, on which both birds remained away for as long as a quarter of an hour. The male bird especially, often choosing a prominent position in a neighbouring tree, would remain for some time uttering a short, sweet strain, not unlike that of the White-eye. On this day, also, the young were fed on insects.

We were naturally very pleased at having been able to photograph both birds : but, as the conditions had been so unfavourable, we decided to devote the following Tuesday (a holiday) to further observation. This proved to be the most interesting and profitable day of all. Nine o'clock in the morning found the improvised staging again erected before the nest. The birds by this time seemed to take these untoward happenings as a matter of course, and we were able to start operations without delay. The young birds were well feathered, and it was difficult to prevent them from scrambling out. They resented the blocking out of daylight and fought so strenuously as to cause us some misgivings for the safety of the nest, which was showing a little weakness at the narrow portion through the action of the weather. Both parents again took part in feeding the young,

and we were surprised to find that this day the food consisted almost wholly of the sticky *Loranthus* berries, devoid of the outer case. Insects were brought only about once in each six visits. The berries were obtained very quickly from mistletoe growing on the trees near by, most of which were badly affected with the parasite. The female usually brought one fruit only at a time, while the male frequently brought two, and sometimes three. The parents themselves also fed on the berries, both when among the mistletoe and when prevented for any length of time from feeding the chicks. After taking several photographs of the parent birds at the nest we removed the young, in order to make some exposures under less difficult conditions. The adults soon became used to the change, and perched on a convenient stick near the imprisoned brood. They had lost all fear of the camera and of ourselves, and took berries from a small mistletoe branch held out to them. We were then able to see exactly how the berries were extracted from the case. We already knew, by observing the empty cup-shaped portions of the cases attached to the mistletoe, that the berry was extracted without the berry being first plucked from the parasite. We now found that the ripe berry was taken crosswise in the bird's bill, and the soft case split in halves by pressure. The free portion of the case was then dropped, leaving the white berry protruding from the half still attached to the branch. By pressure of this remaining half between the mandibles the seed was forced out sufficiently to allow of its being easily taken in the bill. The birds could not be persuaded to take unripe berries. During the time that berries were to be obtained so near at hand we noticed that one of the fledgelings, much weaker than the others, was neglected time after time when they were being fed. We took pity on the weakling and placed it where we thought it would be more likely to receive attention. Evidently, however, the neglect was intentional, and it was fed very little. At the time we were inclined to think this apparent neglect accounted for the bird being a weakling, but it occurred to us afterwards that possibly it was fed on insects only, and passed over when berries were brought. This would appear likely from the fact that all were fed on insects when very young, and on berries only as they became larger and stronger. The

Loranthus seeds evidently passed through the system of the young birds very quickly, and were unharmed.

As the birds had become so trustful, we thought that it would be a pity to leave without taking some pictures which would illustrate how accustomed even shy birds will in time become to the presence of anything unusual. With very little trouble we induced the female to perch on our hands and feed the young. Similar photographs of the male could have been obtained had it not been that the day was far spent and the light useless for further camera work. After putting the young birds back in the nest and covering up our tracks in the vicinity as much as possible, we left the birds to enjoy the peace they deserved.

Some two months later we again visited the spot, and took the remains of the nest for closer examination. We also examined some *Loranthus* seeds which had passed through the young birds and had lodged on the branch of a sapling. All had firmly adhered to the branch and had sent out small shoots. From our observations it would appear that, without doubt, the Mistletoe-bird must be a very important factor in the spreading of *Loranthus*. We have watched other birds among the branches of the parasite when in fruit, but have not seen any of them eat the berries. On 1st Nov., 1915, just a year after our previous observation, we noticed that the *Loranthus* on the same hillside had not finished flowering. Some berries were forming, but none was nearly so far advanced as those noticed the same time last year. We observed two different pairs of Mistletoe-birds feeding on the ripe berries of the native cherry tree; White-eyes and Yellow-faced honey-eaters (*Ptilotis chrysops*) were doing the same. The berries were pulped for some time in the bill, and swallowed with the seed attached. The mistletoe-bird, however, appears to favour the *Loranthus* berries when they are available, as, during our observations last year, they did not eat the berries of the native cherry, although the tree, within a few feet of the nest, was in full fruit.

[The members of the genus *Dicaeum* are very small short-tailed birds, also known as flower-peckers.—ED.]

ON THE BEST SYSTEM OF FEEDING INSECTIVOROUS BIRDS.

By P. F. M. GALLOWAY.

(Concluded from page 147).

On the foods I have mentioned I have been able with very little trouble to keep the swallow for over seven years, when it died practically from old age, also the nightjar for just over five years.

Birds during the dull days of winter should be fed twice a day. The first feed at about 8 a.m., the second and last feed at 3.30 p.m., but from and including May and on to September they should be fed four times. I prefer to do this rather than give two large feeds as the hot weather is liable to turn the food sour. At this time of year I give the first feed at 6 a.m., second at noon, a scanty meal again at 3 p.m., and the last feed at 6 p.m.; there will be just a little left after the last feed which the birds will get at the first peep of daylight, this would be about 3 a.m. It must be remembered that birds in the wild state would be feeding from sunrise to sunset more or less.

EXERCISE.

This is very important. If birds are kept in an outdoor aviary they will get abundance of exercise. If kept in cages (and they can be kept in perfect condition in these) the cages should be fairly roomy, a large one being far and away better than a small one, but the large cage will be very little better than the small one if a lot of perches are fixed in it. Two perches, one at each end and one along the front rail where the food vessels are fixed, is quite sufficient, the object being to give sufficient room between these, so that the bird has to fly from one to the other. It is not hopping exercise alone that is needed but wing exercise, and the latter is entirely lost sight of in the wretched little cages one sees in the bird-dealers' shops.

Some birds, such as thrushes and blackbirds, will do well in a moderate-sized cage, but birds, especially such as the gold-crested wren, long-tailed tit and small warblers require, and should have, a much larger one than would be necessary for a nightingale or black-cap, on account of their extreme activity. The two former in their



COCK NIGHTINGALE TAKING FOOD TO YOUNG.

Photo. by J. H. Symonds

Adlard & West Newman.

wild state are for ever on the move, flitting from one bough to another, hopping here and there, scarcely on one twig for more than a few seconds at a time. A Crystal Palace cage, all wire, with a dome in the centre makes an ideal cage for a pair of gold-crested wrens. One perch at each end of the cage close to the floor, one perch in the middle half way up will do, and in the dome a few pine branches which these birds are fond of playing about on and roosting in will be sufficient.

CLEANLINESS.

This is another important item. A bird however suitably fed, with sufficient exercise will, sooner or later, go wrong if the water is allowed to become foul and the perches or draw board of its cage not kept clean.

In an aviary it is easier to keep birds clean than in a cage. I wash the perches every morning and clean every drawer board every other day and use about half-an-inch of moderately coarse pine saw dust, taking the drawer boards out and sifting the dust and throwing the soiled portion into the waste box, and by just sprinkling a little fresh dust on top all is again sweet and clean. If the perches and drawer boards are allowed to get really dirty this will happen, the bird gets a little of the excrement on its feet and slightly soils the perch, each time it adds a little more dirt to the perch and also more to the underpart of the feet. In hot weather especially, this hardens on the feet and might not be noticed by the ordinary observer until a little lump ever so small is seen on the toe; if this is allowed to remain on the toe for only a few days it will have become as hard as cement, and when the bird's toe has been washed there will be a very tiny brown spot just noticeable on the underpart of the toe, and when the bird is replaced in the cage, whenever the bird gets the perches soiled the dirt will cling again to this very toe and on the self same spot. If the bird is turned into an aviary, where it can go into some water when it likes, nothing more may occur, but if still kept in a cage, of which the perches and floor are not kept reasonably clean, the toe mentioned will by degrees become slightly swollen, and as often as not, as the disease progresses, the claw down to this diseased joint will wither up, result loss of a toe, the toe actually falls off; but this disease, for it is a

disease. I will treat of fully at some future time when writing on the ailments of birds. One very extraordinary thing is that I have seen seed-eaters, finches and such like, with their feet caked with dirt, and yet, if washed carefully with warm water, their feet have been perfectly healthy; needless to say that a quarter of this amount on the foot of a soft-billed bird would result for certain in the loss of claws or toes or both, proving that the feet of the latter birds are very tender.

Some bird-keepers may say "What am I to do? My birds will not go into the bath which would keep his feet clean." Then I would say do as I do (and I have several birds); take the bird carefully in the hand and wash its feet in warm water after dissolving a little boracic acid, and the more a bird is handled I find the tamer it becomes. The sawdust I use for tame birds and used to the cage, it would be absurd to use it for unsteady birds, the result would be that the dust would be scattered all over the place and the water-tin full of sawdust instead of water. For such birds I personally use fresh cakes of fern-leaf moss, which I get myself from the woods; for those that are not so fortunate as to be living near the woods in the country I know of nothing better than fine cocoa-nut fibre or peat moss damped and pressed down firmly on the drawboard.

I do not use sand for any insectivorous birds except Wagtails. For these I use zinc drawer boards to their cages, which I cover with about a quarter-of-an-inch of clean sand, any sand will do; there is always a shallow water-tin on the floor of their cages, and as these birds are more often paddling in and out of the water than sitting on their perches, it matters not how damp they make the sand, in fact it is natural for them to run about on damp sand and their feet in this way are kept in perfect order.

The toes of all wagtails (especially the greys) are very slender and if these birds are kept on sawdust, and no water dish for them to paddle in and their feet becomes dirty, they very quickly get diseased toes. I have found them very liable to this. I have seen it advised in bird-books that birds should have their cages cleaned out at the farthest once a week. Well, all I can say is that I should be sorry for the condition of my soft-billed birds if I had to leave them for a week without cleaning them out. I prefer to do this every other

morning, it takes less than half the time it otherwise would if allowed to go a week and the birds are infinitely better for it, of this I am sure. Clean water for drinking should be given every day in winter, and always twice, morning and evening, in summer time. I prefer rain water.

CORRESPONDENCE, NOTES, ETC

INTELLIGENCE OF A STANLEY PARRAKEET.

The other day I had an amusing instance of intelligent observation in a cock Stanley parrakeet, an old show bird recently imported from Australia, but wild-bred. Since his arrival, he and his mate have lived in two of the rectangular cages I use for *Platycerci* and are now thinking of nesting. When the snow came I had to take in a rosella from an outdoor aviary and she was put in the same room as the Stanleys in such a position that they could hear but not see her. The following day I decided to shift the rosella from the rectangular cage she was occupying into an ordinary parrot cage and a servant brought it in and set it down on the floor (empty) so that the top was visible to the Stanleys. In a moment the cock was on the floor of his own cage in a corner nearest the parrot cage, indulging in violent abuse and tail-wagging, under the impression that the cage contained the rosella, although he had never seen her in it, or any other bird for that matter. The interesting thing is that after a considerable interval he recognised a parrot cage at sight, not as a feeding-place, a home, or a prison, but as a receptacle for parrots, and he knew that if you hear a parrot in a room and see part of a parrot cage the parrot is sure to be inside the parrot cage and nowhere else. So certain was he of this, that the fact that he could not see the rosella and had heard her calling from a different direction, did not alter his opinion of her obvious whereabouts in the least. I may add that when he was shown a cage some weeks ago he took no particular interest in it, as he had at that time no reason to believe there was anything in it.

TAVISTOCK.

AN EARLY BLACKCAP WARBLER AT THE FRONT.—B.E.F.

Captain PHILIP GOSSE writes to say that he saw a blackcap on the 17th March, the first migrant he had noticed up to that date.

NOTES FROM SALONIKA.

Mr. HUGH WORMALD sends these interesting notes, written by his brother from Salonika:—

Nov. 19th, 1915. There are a few hares about, partridges, snipe and duck, lots of hawks, buzzards, magpies, tortoises by the dozen, lizards, and a few serpents. There is a very pretty grey hawk, very like a sea gull in markings, which we cannot place, a fair-sized bird. (Surely a harrier, H.W.) The sheep

dogs of the country are big and fierce like wolves, six of them assaulted us this afternoon and put our ponies to flight!

Dec. 2nd, 1915. It has been infernally cold the last week, snow and blizzards, so we abode in our tents most of the time. The snipe flock round as tame as sparrows within fifty yards of the camp. There are also geese and ducks about, a few quail, hares, partridges and pigeons, but we have no gun. There are lots of kites, hawks, etc. about, but I cannot kill them or would send you a skin of each sort. I hunted a sea eagle one day.

Dec. 26th, 1915. I caught a small horned viper yesterday and a harmless snake, and we killed by accident a noble marmot, like an enormous mole, twice the size of an ordinary mole, with rodent's teeth and a square face and no tail. If I can get another I shall take his skin, but this one had a pick-axe through him and was too smashed up. I will try to get you one of the grey hawks as there are now two guns in the battalion.

Feb. 6th, 1916. I have dug a few swamp pits in my trenches, 2ft. deep and 3ft. long, with quartering over the top for drainage, and nearly every morning I find three or four green tree frogs and two or three fat, short-tailed field mice in them, so I have to take up the boards and fish them out. The mice are very pleasant, fat and round with round faces, nearly black; they don't bite when caught, but sit up and wash their faces on your hand, being rather slow of movement. There are several little owls about and very noisy, but I have not discovered their lair. I shall search one Sunday and see if I can catch one in a hole as they are usually in one rocky bit of the hill just behind my tent.

A WONDERFUL FIND.

[We insert this account from a New Zealand paper, the truth of which we cannot vouch for].

A remarkable discovery of bird life was made by Mr. R. E. Clouston, mining engineer, of Rockville, in the Collingwood (Nelson) district recently. Mr. Clouston knows a great deal about the bird-life of New Zealand, and it fell to his lot whilst exploring the hinterland of his district in a wild country (of poor land), known as the Goulard Downs, some twenty-six miles from Rockville, to discover an entire colony of birds of the species that are becoming admittedly rare, and in some cases were believed to be extinct. He could hardly believe his senses on coming into contact with a rookery of the great kiwi (*Apteryx haasti*), not a few stray families, but thousands of them, sporting and grubbing about in the patches of tussock land which alternated with clumps of virgin bush. And not only kiwis (big mottled fellows) but thousands of kakapos (the night parrot, so rare that an advertisement appeared in an Auckland paper a few months ago offering £80 for a pair of them).

Mr. Clouston arrived here on Thursday morning with twenty-five of the big kiwis, and the excitement created on the wharf was something to be remembered.

"I've been a bird man all my life," said Mr. Clouston, "and have travelled all over New Zealand, and have never seen anything like it. It is really a wonderful discovery from a scientific point of view, and will mean the preservation of the various species. These birds I have with me are to be liberated on the Little Barrier Island, which, of course, is a sanctuary.

"Not only are there kiwis and kapapos on the block, but there are blue mountain duck by the dozen, saddlebacks (worth £10 each), New Zealand robins, wren's, owls, Cook's petrel's (rain bird), keas, kakas, tui, mako-makos, warblers, riflemen, creepers (very rare), Maori hens, fantails, tomtits, and pigeons. It was a harvest of rarities. The kiwis are there because the feed is good. We found great worms from 4ft. to 5ft. in length. The longest one I measured was 4ft. 10in.

"As soon as I found them I communicated with Sir Francis Bell, and asked him to have the block—it is Crown land—declared a sanctuary, and that has been done. It was gazetted some ten days ago. In the meantime the find had got about and the place has been visited by men interested in bird-life, among them Mr. James Drummond and Mr. Edgar Stead, of Christchurch, Professor Cotton, Dr. Thompson (of the Dominion Museum), and Mr. Fred. Sparrow, and they are all as enthusiastic as I am.

"I have made a pet of one of the big kakapos. He stands 3ft. high, weighs 22lb. and has got an enormous beak, but he allows the children to feed him out of hand. He's a beauty, pale green plumage with long whiskers, and when he's up a tree you can't tell him from moss on the trunks—natural protection again."

Mr. Clouston says that the birds are so valuable that the sanctuary will have to be given adequate protection at once, else there will be wholesale poaching by those prepared to trade on Mr. Clouston's discovery.

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We are also indebted to the "Emu" for the following:—

BIRDS OF A MURRAY ISLAND.

By CHARLES BARRETT, C.M.Z.S., Melbourne (Vic.)

During a brief holiday in November, 1915, at Kulkyn station, about 50 miles from Mildura, I spent many pleasant hours among the birds on a small island opposite the homestead. The Station Creek flows along one side, junctioning with an extensive billabong at the eastern end of a long strip of slightly elevated land, and with the Murray River at the other. The islet, which is the shape of a boomerang, is covered in parts with a prickly shrub locally known as "native box thorn"; here and there are small trees, acacias and eucalypts, and some fine old red gums along the water's edge, where rushes and grassy areas provide good cover for snakes.

In a space beneath a big clump of "box thorn" was the bower of a pair of Spotted bower-birds (*Chlamydera maculata*). Mr. C. Thompson, manager of the station, who is keenly interested in birds, stated that the bower had been

there for several years, but had been shifted once a few yards. He had often seen the birds at their playing-place, running through the bower and tossing the bones, berries, and other objects about with beak or claws. I was not so fortunate as my host, but had a good view of a male bower-bird in a pepper-tree at the homestead. The collection of bright objects at either end of the bower was fairly large, and consisted principally of bits of weather-worn green and blue glass (from bottles), which formed a kind of mosaic on the hard, dry ground. There were a few glass stoppers from sauce bottles, a piece of perforated zinc, numbers of bleached sheep-bones, one or two green berries, twigs and leaves, an odd feather, and, in the very centre of the bower, a large pellet of lead. The bower itself was neatly and strongly built, and an excellent example of the architectural skill of *Chlamydera maculata*.

I fear that, in the course of a few years, unless measures are taken for their better protection, the Spotted bower-birds will share the fate of the Mallee-fowls (*Leipoa ocellata*) in the Mallee country of Victoria.

In a bush close to the bower-birds' playground on the Murray islet a pair of Crested pigeons (*Ocyphaps lophotes*) had a nest about three feet above the ground. When I flushed the female the nest contained two eggs; next morning one had hatched, and a few hours later there were two chicks on the platform of twigs. The parent birds were shy. A footstep a few yards from the bush was sufficient to frighten the female, which went whirring from the nest to a dead tree some distance away, where she would remain perched while anyone was in the vicinity of her nursery. I tried on several occasions to photograph the brooding bird, but in vain. The camera was placed at the side of the bush opposite to the "avenue" approach to the nest, and was screened in branches. Then I walked away ostentatiously, in full view of the female perched in the dead tree. Hidden, I watched her through the glasses, but she remained calmly on her perch—a still figure on guard. Once or twice in the course of an hour the pigeon paraded the twisted grey limb to which she always flew on leaving the nest, and more often she gazed around as if searching for some hidden danger. I went for a walk, and returned to find the wary bird still on the dead tree, watchful and patient. There were several nests of the Crested pigeon in the pepper-trees at the homestead, but my luck was no better there, though the birds were certainly less fearful than those of the islet. They, like the other native birds on Kulkyn, enjoy protection, and one can approach them closely. But the camera was new to the pigeons of the pepper-trees, and none would face it. They wore out my patience, and at the end of a long afternoon I took the camera from a perilous position on a high bough and acknowledged defeat.

Several old nests of the Crested pigeon were found in the bushes on the islet, but only one pair of the birds appeared to be breeding there this season. Crows, I learned, search diligently for the nests, and take toll of eggs and squabs. Possibly some of the nests that I saw had been robbed by the big birds. The wariness of the island pigeons may be due partly to the persecution of crows.



THE OWL PARROT.
(*Stringops habroptilus*.)

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THE OWL PARROT.

Stringops habroptilus.

By GRAHAM RENSHAW, M.D., F.R.S.E.

When a rare bird is imported, every detail of its habits should be carefully noted for the benefit of aviculture: but when it belongs to a species whose very existence is threatened it becomes an imperative duty to secure a permanent biological record before it is too late. Already rare even in its native haunts, the owl parrot of New Zealand has never been common in European collections: even as a museum specimen it remained unknown till 1847, when the Trustees of the British Museum purchased a skin for £24. The writer has never seen one in any Continental Zoo., nor observed its name in any dealer's list.

The early attempts to import the owl parrot ended in disaster. About 1852 H.M.S. "Acheron" was engaged in exploring the coast of New Zealand. There were plenty of owl parrots in the neighbourhood, and many fledglings were brought on board; it was, in fact, a grand opportunity of introducing the species to aviculture. The cage accommodation was unfortunately too limited for the captives: in a few days they began to die off, and of those who survived a few weeks many began to develop deformity in the legs, as if from faulty feeding. The ship's surgeon, Dr. Lyall, seems to have been the most successful of the amateur naturalists: he kept one of the birds in good health until within six hundred miles of England, when it was killed by accident. About this time Sir George Grey attempted to send an owl parrot to England, but it died off Cape Horn.

In 1870 the first living example seen in England—probably in Europe—was brought home by Mr. G. S. Sale, who afterwards became Professor of Classics in the University of New Zealand. Unlike so many of these birds, this example was quite playful and good-tempered, and readily showed itself in daylight. Mr. Sale eventually deposited the bird in the Zoological Gardens: it arrived on September 20th, 1870, and was excellently figured in the "Field" for October 15th of the same year. This specimen attracted a good deal of attention: the public, which had flocked to see the first hippopotamus in 1850 and the first great anteater in 1853, began to inquire for the owl parrot. Mr. Sale's pet had however changed its nature with its changed surroundings: no longer active in the daytime, it hid itself, and only came out at night. The Zoological Society offered £50 for the bird, but the offer was declined.

In the winter of 1870 Mr. D. L. Murdoch, a resident of Auckland and Inspector of the Bank of New Zealand, sent an owl parrot to a friend in this country. The bird was shipped on the "Mary Shepherd," and a letter was sent to announce its arrival. The letter miscarried, however, and Captain Peek deposited his captive in the Zoo, till the owner should appear. The bird remaining unclaimed and Mr. Murdoch eventually presented it to the Zoological Society: it lived some time in the Gardens, and was on its death dissected by Professor Garrod. In 1874 there seemed some possibility of breeding these rare parrots in England: for on November 3rd of that year three specimens were received at the Zoo.—a pair and an odd bird, it was thought. Perhaps, as often happens, the odd bird was bullied by the pair, for it died a month later. The survivors, however, did not breed.

The writer has had the rare privilege of studying two living examples of the owl parrot. Neither of the two was vicious, they were perfectly good tempered even if disturbed in daylight, merely croaking as if in expostulation. When released they ran with the head extended and lowered, *Apteryx* fashion, till they reached a dark corner: the gait was heavy and waddling, as if lame, the short wings were held either raised or merely extended from the sides of the body. Apparently the wings act mainly as balancers: the writer saw no attempt to flap them, their function seemed merely

mechanical. When raised, both wings were lifted together, not held up alternately. The owl parrot can climb, the tail helping to support the body.

In life this parrot is very beautiful, being of a bright sap green colour, shining with a waxy gloss as if enamelled, and forcibly recalling the dictum of Dr. Bowdler Sharpe, that the feathers of a bird are living entities, and by no means inert matter. The head is rounded: there is no marked constriction between neck and trunk, the stout neck passing gradually into the robust, rotund body. These birds are half-blinded in strong daylight, perhaps the sunshine is painful to them, as they do not voluntarily remain exposed to it. Museum workers have compared them to owls, on account of their facial discs and soft plumage: but they are far less tolerant of light than owls. An owl may often be seen perched well out in the sunlight, apparently even enjoying the light of day: the owl parrot usually endeavours to hide in some dark corner, squatting on the entire length of the tarsus. Those who have seen a mouse-bird (*Colius*) crouched on the ground on its tarsi will understand the writer's meaning. Again, the eye of an owl parrot is quite small, a mere dot in the facial disc, very different from the expanded, cat-like orb of an owl. These parrots often assume an upright attitude, the body being supported by the strong, elastic tail, and the little, short-sighted eyes blinking with absurd dignity, as the bird holds itself stiffly erect. This species has apparently never been taught to talk: the usual note is a pig-like grunt.

In view of the threatened extinction of the owl parrot any discussion of its treatment in captivity may seem superfluous. The Government of New Zealand has, however, set aside considerable reserves for the persecuted island fauna: Little Barrier Island in the north and Resolution Island in the south are now sacred to the avifauna, and are warded by regular custodians. Many of the mountains again are set aside as national parks, and some of them in addition are definitely named as bird sanctuaries. Many species are permanently protected, and there is a local Association of Acclimatisation Societies, which meets annually.

It is thus possible—though unlikely—that the owl parrot may some day be better known to aviculture. It is reputed a difficult

bird to keep, but the writer does not believe in "difficult" species. He considers the food problem to be the key to the situation. The longest duration of life recorded in captivity is two years, but in view of the well-known longevity of its congeners this limit should be capable of considerable extension. In confinement these parrots have been fed on apples, grapes, tomatoes, oatmeal and water, cabbages, and lettuce. This range of food, though extensive, bears little resemblance to the diet of the wild birds—broom-tops, moss, and bracken. Such wild food could be closely imitated in this country, but whether British aviculturists will ever have any owl parrots to experiment with is a problem that is indeed problematical.

NOTES ON HONOLULU BIRDS.

By Mrs. C. E. MAUD.

Bird-lovers who come to the island of Oahu, on which Honolulu is situated, are usually much disappointed at the few birds to be seen. For, with the exception of mynahs and sparrows in plenty, there are few others to be either seen or heard. Now and again out on the plantations one may catch the song of an English lark, or up the Nuuanu Valley on the golf links a Chinese thrush lilts its throaty song through the late afternoon air.

At night, down on Waikiki beach, one hears the raucous cries of a mud hen, and that is about all. These birds were all imported here at one time and another, and before their advent there were a number of varieties of native birds, all of which the Chinese mynahs have killed off. At present, these aggressive and noisy birds overrun the whole place in partnership with the sparrows, with whom they appear to live in comparative harmony, roosting in the same trees and quarrelling over the same food.

The mynahs are pretty birds, with a brown body, black head, wings and tail and white fan on tail and wings when flying. Their eyes are yellow and they walk and behave much like parrots. Their voices, while loud, are melodious, and they have an unlimited variety of calls.

While walking out in the pretty little park beyond Waikiki, I

picked up the egg of a mynah. It is a beautiful clean turquoise color, without spot or blemish of any kind. The mynahs are very partial to any kind of paper for their nests, and will tear great strips off a newspaper and fly off with it streaming in the wind behind them. They have terrible fights among themselves, and I have frequently run out of my cottage to rescue an unfortunate, beset, and nearly plucked clean by his vengeful companions. Despite careful nursing these wounded birds shortly died, and quite frequently I have found dead ones on our lawns, actually pecked to death by their own kind.

In this wonderful climate, where for nine months the temperature averages from 80 to 90° and in winter never goes lower than 68°, these birds have a pretty easy life, excepting when one of the big Kona storms comes, bringing its floods of rain and crashes of tropical thunder and lightning. At such times the mynahs and sparrows hide close up to the trunks on the wide leaves of the coconut and Royal palms or deep into the branches of banyan and mango trees. The only enemy the birds on these islands have is the mongoose, which also was imported here for the purpose of killing the small rats that injure the sugar cane. However, these mongooses have become a great pest themselves, preferring to live near towns and villages and eat people's chickens, and steal the eggs of chickens, ducks and all birds.

There are a great many duck farms on the half-submerged swamp lands, where Chinamen raise large flocks of mostly Chinese ducks, both for the table and for their eggs; the latter being much esteemed by the natives and Chinese population here.

This is our fourth winter here. We came to escape cold and bad weather at home and to live out of doors. We brought over a motor car to run around the island in, and to take us daily from our cottage down on the famous Waikiki beach up to the Country Club in the Nuuanu Valley. At the head of the Nuuanu Valley is the famous Pass, called in Hawaiian "Pali," up which nearly 200 years ago the great invading conqueror Kamehameha from Hawaii drove these poor Oahuans, and when they reached the top thrust them all over the precipice more than a thousand feet into the valley below. A splendid motor road runs up there now and a fine stone

bridge crosses the chasm that cost so many people their lives, and descends into the pine apple plantations on the other side of the Island.

THREE ATTEMPTS AT BREEDING SUGAR-BIRDS,

By Miss E. F. CHAWNER.

The three species concerned are the Red-throated Blue Sugar-bird (*Glossoptilla ruficollis*), the Blue Sugar-bird (*Dacnis cayana*) and the Yellow-winged Blue Sugar-bird (*Cæreba cyanea*), and though each attempt failed they may be worth recording.

First in the field were the Red-throated Blues, bought Feb. 28th, 1911, from the late Mr. Sutcliffe, who had privately imported them. They were in faultless condition and quickly made themselves at home in a small garden aviary with heated shelter. Their diet was the same as that of other sugar birds: sweetened milk sop, grapes, banana and orange; the hen was very fond of maw seed and occasionally swallowed a mealworm, but I never knew the cock to take either seed or insect. They were a charmingly pretty pair and the cock had quite a nice song. When they were sent to me Mr. Sutcliffe warned me that the cock was "wheezing," which made me very anxious, but presently I discovered that the so-called "wheezing" was his alarm cry, though I must say that it sounded more like bronchitis. If I went near the aviary after dark he would "tune up" at once.

They began to look about for a nesting place during the second week in June, and by the 24th had built a neat cup nest of heather twigs, cotton wool, and bents, and lined it with hair (much like a hedge sparrow's nest) in the corner of a Hartz cage fastened high up in the shelter. The cock continually accompanied the hen in her search for material, and mounted guard while she was building, but I do not think he actually carried anything or worked at the nest. When they had finished they pulled it to pieces and finally built in an old wicker cuff high up in the same part of the aviary where they were practically invisible from below. The hen began to sit July 5th but was not at all steady, flying off as soon as the aviary door was

unfastened. I was afraid to look at the eggs, though I longed to see them and ascertain their number. When I thought nestlings might be expected I swept all the flies and aphides and other insects I could and turned them into the aviary together with living ants' eggs, very tiny mealworms and ripe fruit, hoping that something might suit. On July 18th I found a newly-hatched nestling thrown out and quite dead. I fancied that the mother caught some insects and carried them to the nest, but next day I found another nestling thrown out and the nest empty. I hunted for egg-shells but could not find a trace of any, probably some of the other birds had eaten them.

At first they seemed inclined to go to nest again, but the hen soon tired of it and took no more notice of her mate's blandishments.

Before pairing, the cock used to display, spreading his wings and tail and puffing out his feathers. After pairing had been accomplished both birds uttered shrill squeaks in the style of the English robin. To my great regret the hen died of a chill during the autumn and I could not get another. The cock lived until 1913, always in beautiful condition. End of, chapter 1.

Chapter 2 begins in June, 1913, with a pair of blue sugar-birds. These charming little creatures are too well known to need any description, but I may say that I have found them the most easily tamed of all the soft-bills. This particular pair were finger-tame and absolutely without fear. Their method of intimating a wish for nesting material was to fly on to my shoulders and tug at my hair and they showed much annoyance on finding it a fixture. I supplied them with tow and they speedily chose a place in a thick bough of Cypress in the open flight, where, on June 8th, the hen began to build a dainty little cup nest entirely of tow. The first egg was laid on June 16th, pairing having taken place repeatedly during the previous day. The egg was large for the size of the bird, long, with a white ground heavily ringed with rusty red round the big end. Another egg completed the clutch next day and incubation began. I had great hopes, seeing that the birds were so tame, that all would go well. But it was not to be! On the 20th I found the hen dead on the ground beneath the nest. On examination she was found to be very fat, and this, combined with the excitement of nesting, had caused her death.

I know that it is not uncommon for these birds to go to nest in confinement, and I have heard of several cases where young have been hatched, though as yet I believe none have reached maturity or even lived to leave the nest. Had my birds hatched out I believe they would have fed their nestlings on green fly and wasp grubs. The chief difficulty appears to be that while sugar birds put on fat very quickly and are decidedly greedy, thus becoming liable to apoplexy, if they are not in high condition they will not go to nest and the golden mean is hard to attain. End of chapter 2.

Chapter 3 deals with Yellow-winged Sugar-birds, of which I had a lovely pair last spring. The hen has lived in my aviary since the beginning of 1913. Last June she and her mate began to be very noisy, squeaking at one another continually, the cock erecting his head feathers and spreading his wings to show the yellow colouring. Then the hen became spiteful towards the blue sugar-birds and they had to be removed lest harm should come to them. On the 18th June the hen began to build a nest of tow high up in the corner of the shelter in a box branch, driving away the Indigo buntings who also had intended setting up house there. She built the outer part and then came a hitch, for she could not find any lining material to her liking. Hitherto rather shy, now she became bold and almost mobbed me to try and obtain something suitable. I tried soft dried grass, strips of bass, deer hair, cotton wool, moss, dead leaves, but none of them pleased. She would come and examine them, turn them over and then resume her search. At last I gave her some fine shavings of paper such as are used for packing chocolates and she took to this at once and worked away as busily as possible. The first egg was laid June 22nd, the second on the following day and she began to incubate. For two days all went well and then she forsook, for no reason that I could discover. The nest was a pretty object, a deep cup firmly woven to the twigs of the box bough; a great deal of the white paper was used, and altogether it was a rather bulky affair. The eggs were large and long, very pale brown darkening with age, heavily spotted and mottled with grey at the large end. The birds did not make a second attempt and soon after the cock went out of colour. So ends chapter 3.

OBSERVATIONS ON THE BIRDS IN A SUBURBAN GARDEN.

By A. A. GOODALL.

Being a resident in the neighbourhood of Dulwich Wood—made famous by its associations with the poet Byron, who, according to tradition was in the habit of visiting the gypsies that made it their home in the early part of the nineteenth century—I was much interested in the article contributed by Mr. Stone in the December issue of our magazine.

As most South Londoners know, Dulwich Wood forms a connecting link between the district of the famous College and the heights of Upper Sydenham, and many of the delightfully old-world gardens of the fortunate residents of the latter neighbourhood abut on the wood, to which their occupiers are privileged to have access.

As a bird sanctuary, Dulwich Wood and its immediate environments has always been especially favoured, and the immunity from disturbance which its feathered occupants enjoy is attributable to the vigilance of the College authorities, who place serious obstacles in the way of would-be intruders upon the property; consequently the various species of migrant and other birds making their home there, suffer little from the depredations of the ubiquitous collector.

The writer has for many years had the opportunity of studying the avifauna of this beautiful spot, in parts so wild and secluded that the visitor might well imagine himself a hundred—instead of only five—miles from the great metropolis. Here every year, at their appointed time, come many songsters from afar, whose liquid notes bring with them the promise of summer's wealth, and often one may come across species not met with in seemingly more favoured spots.

Among those not mentioned by Mr. Stone is the wood-wren (*Phylloscopus sibilatrix*), which is a regular visitor to Peckarman's Wood, that being the name by which this particular part of what remains of the Great Northwood is known. This charming songster may be heard continuously on a bright May morning, and I have a note of a nest which I found among the tangle on the ground in June, 1910: it contained three eggs and the same number of

young. The chiffchaff also frequents the wood and the surrounding gardens; its familiar note, as well as that of the species just named, being heard right up to the end of June. Then there is the willow-warbler, which is always in evidence here during the summer months: indeed it occurs very generally in the district of Old Dulwich, where trees are plentiful and the foliage attractive to insect-hunting birds.

So far I have not been able actually to identify the garden-warbler's song in the immediate neighbourhood of the wood, though I have heard it from among the bushes on the railway bank of the South-Eastern line, close to the station, where also during last spring—for the first time in my recollection—a blackcap sang continuously in May. This latter migrant I have frequently heard in the plantations adjacent to Dulwich wood.

In addition to chaffinches and greenfinches, which are both fairly common in the neighbourhood, one occasionally comes across vagrant flocks of brown linnets, while the reeling note of the lesser redpole may often be distinguished as small parties of these diminutive birds fly over.

Of the tits, the great and the blue abound, but the cole tit is less frequently met with, though it cannot be called scarce. We have also the marsh tit, but its occurrence is rare, and I have not myself seen it. Other visitors include the spotted flycatcher, which I have observed usually in the same spot each year; also the cuckoo. The latter bird does not, I think, remain long in the neighbourhood, since I have neither seen nor heard it later than the end of April.

In winter, one may occasionally observe small flocks of redwings feeding in the adjacent meadows; they may be readily distinguished from their larger relatives by the aid of a good binocular.

A quiet walk through the winding paths of the wood will generally reveal the presence of jays, which are regular residents here, and particularly noisy at times; while a keen ear may sometimes detect the tapping of the woodpecker, a by no means unfamiliar sound in the Dulwich district.

Though I have not seen the common "yaffle," I had an unexpected surprise in 1911, when, during a ramble one March

morning, I enjoyed a fine view of a great spotted woodpecker engaged in working assiduously at the trunk of a silver birch tree, of which one or two specimens in the vicinity showed unmistakable indications of the bird's handiwork. My attention was first attracted by the woodpecker alighting on the tree, and through my glass I was able to put its identity beyond doubt, the brilliant crimson of the under tail-coverts being plainly seen.

Since that date I have not been fortunate enough to observe this interesting bird again, and, so far, its smaller relative, noticed by Mr. Stone, has not come across my path.

EGG MARKINGS AND SUNLIGHT.

By DR. A. G. BUTLER.

Very little seems to be known respecting the production of the markings on birds' eggs. In some cases, of course, the colouring and ornamentation are admitted to be protective and consequently are to a great extent hereditary; but, in many cases, the ground-colouring and striking character of ornamentation render them extremely conspicuous and therefore are valueless for protective purposes.

During the time when I was an industrious collector of our British nests and eggs I paid particular attention to the greater or lesser intensity of the markings on the specimens which I found, in conjunction with the character of the nests and nesting-sites in which they were obtained: in a few cases also I noted peculiarities in the colour-scheme of eggs laid in my aviaries: these observations all tended to convince me that sunlight and heat during the period of oviposition have a marked effect in intensifying the colouring of eggs.

With a few notable exceptions, birds which lay in comparative darkness produce unmarked, and more often than not white eggs: as examples one may cite the spotted pardalote or panther-bird of Australia which builds in a hole, the waxbills, grassfinches and mannikins which lay in spherical nests often with a tubular entrance, some of the typical weavers whose retort-shaped nests are closely

woven, the oven-birds, woodpeckers, wrynecks, kingfishers, motmots, bee-eaters, toucans, barbets and parrots.

Starlings which build in holes or crevices lay more or less blue eggs, though I have found white eggs of our English starling; but it should be noted that even when bright blue they are destitute of markings: on the other hand the titmice which build in more or less secluded places, lay white eggs more or less spotted with red or reddish, yet varying greatly in the size and intensity of their markings in relation I believe to the amount of light which falls upon the sitting bird. The touracous which build a platform-like nest are said to lay bluish-white eggs,* and the doves, as a general rule, construct somewhat similar nests and lay more or less white eggs, but this lack of colouring may be inherited from progenitors who built in semi-obscurity, as the rock-pigeon still does; moreover it would seem from the more or less buff colouring of the eggs of some of the African bronze-wings that there is a tendency already in these birds to acquire a definite pigmentation in their ova.

I have noted elsewhere that the eggs of the green singing-finch which are described by Stark and Selater as pale bluish, sparingly spotted towards the larger end with pale reddish-brown, when laid in my indoor aviaries, where they were exposed to little if any sunlight, were creamy-white, more often than not without markings and at best with only a few buffish spots at the large end. On the other hand eggs of the Chingolo song-sparrow laid in Mr. Teschemaker's aviary had a white or cream-coloured ground-tint, but the hen of the young birds which he sent me laid eggs in a light aviary to which only the early morning sun penetrated with the normal pale blue-greenish ground-tint and with well-defined sienna markings.

And now I will advert to some of the more interesting cases which impressed me while collecting British birds' eggs: at first I secured the eggs alone: but subsequently, for purposes of accurate description in my Handbook, I found it necessary to make a collection also of the nests with notes of the sites in which I found them.

The eggs of the various species of British thrush vary enormously and appear to be affected by the position of the nest, the

* Those laid by my white-crested touracos were white.—ED.

more exposed nests containing the more heavily spotted and blotched eggs; moreover I noticed that in these, as in other species, the eggs first deposited before the hen begins to incubate, are less distinctly marked than those laid subsequently, I imagine because greater warmth is generated when the mother is snug than when she is out in the open. In the case of one of a clutch of white blackbird's eggs given to me by a lady friend I regret that I failed to ascertain the position in which she discovered the nest.

Eggs of the robin laid in holes in fruit trees, where the sun did not reach them, were noticeably whiter and more sparingly speckled than those taken from sloping banks on the borders of woods or from openings in ivy covering walls, where they were exposed to the light. In most of my wren's nests the spots are reduced to points, as might be expected from the small entrance to these cave-like nests. In a case where a blue-tit which had probably been deprived of its own nest, had deposited three eggs in that of a sand-martin the markings were few and reduced to mere dots, thus again favouring the view that sunlight modifies the character of the eggs.

Of the British *Hirundinidæ*, as is well known, the only species which lays spotted eggs is the swallow, the nest of which is open at the top, and the most heavily marked eggs of that species which I obtained were laid in a nest built under a portico of a mansion in a position exposed to bright light: I figured one of these eggs in my "Handbook of British Oölogy" pl. XXXVII., fig. 6. When the nest is built, as it sometimes is even in England, close below the overhanging eaves of an outhouse and therefore in shadow, the markings are small and inconspicuous, at any rate that is my experience.

The spotted flycatcher usually builds in a fairly exposed position, often on the branch of a fruit-tree trained against a wall, or in a slight depression at the junction of a branch with the trunk of a fruit-tree; but sometimes in a hedge or the forking branches of a large shrub; the largest, palest and least marked eggs which I ever found were in a nest built in a Hawthorn hedge and which did not greatly differ from some eggs of our greenfinch; this nest was, of course, less conspicuous than if it had been situated on an open

branch, but the bird flew off as I approached or I might have incorrectly identified it.

The largest and most heavily marked eggs of the common sparrow were in a very remarkable and quite abnormal open nest built in the forking branches of a large Hawthorn and vaguely resembling a duck's nest: Mr. Frohawk has illustrated two specimens from this nest in my "Birds' Eggs of the British Isles," pl. IV., figs. 142, 143. Examples of the eggs of the tree-sparrow from nests in shadowed holes in trees proved to be lighter and less heavily marked than those which I obtained from the stumps of hollow branches projecting from pollard willows, into which the sun shone during part of the day, but eggs found in a sand-martin's nest in a mole-run extending from the side of a brick-earth cutting varied a good deal in intensity; whether the snow-white feathers of the nest, by reflecting light, have any effect upon the colouring it would be difficult to say, the warmth of the nest probably contributed.

The least marked eggs of the linnet were obtained from nests built near the ground in thick brambles, but startling variation in the eggs of this species seems to be exceptional. I have only twice found almost entirely unmarked white eggs of the yellow bunting, the nests being built in dense short scrub tangled with bramble, nettles, &c., so that they were completely shaded: one of these examples is figured by Mr. Frohawk (pl. V., fig. 188) of the above-mentioned work.

And now I think I have brought forward sufficient evidence in favour of the view that light and warmth affect the parent bird during the period of oviposition, producing intenser colouring and bolder marking in the eggs which she lays; whereas cold and shade tend to decrease these characteristics. Of course we require further evidence touching the correctness of this view, and thus a new field for experimental study, and I think a fascinating one, is open to the aviculturist as well as the field-naturalist.

Mr. Beebe has proved that moist heat intensifies the markings in the plumage of birds, therefore I see no reason why it should not affect also the colouring of eggs laid by birds subjected to somewhat similar influences: at any rate it is up to doubters to prove that it does not.

BIRDS SEEN IN FLANDERS.

By CAPTAIN P. GOSSE, R.A.M.C., M.B.O.U.

I have read with interest Lt.-Col. Tweedie's account of the birds seen by him in Flanders this last autumn and winter and venture to add to his list those seen by myself. It will be enough perhaps to say that my observations were made in the neighbourhood of Armentieres near the French-Belgian frontier, and extend from the trenches back to about five miles behind the firing line.

My chief occupation "out of hours," though, was the trapping and preserving of small mammals, and I was fortunate enough to catch specimens of all the native small mammals, except the "Spanish dormouse," which is evidently the animal which Col. Tweedie found in the thatch.

I must say I was surprised at the number of birds to be seen and the number of species; as, apart from the daily gun-fire, the country is not one in which you would expect many birds, it being flat, much inhabited, and no woods or coppices.

In the trenches themselves there are huge flocks of sparrows, of which a good number are tree sparrows (*P. montanus*). I think these flocks are due to the crops of standing corn that were left uncut. There were several fine coveys of "common" partridges (*Perdix cinerea*), and, like Col. Tweedie, I have not seen any "French" partridges (*Caccabis rufa*). Jays lived among some trees by a mined farm, between our trenches and the Boches', as did also magpies. I saw one day a pair of harriers quartering "no man's land," but cannot say if they were hen harriers or not. I could only see them with difficulty from where I was in a trench. A goldfinch was seen near one of the communication trenches.

Larks abound everywhere, — nearly all, the crested lark (*Alauda cristatus*). Unlike Col. Tweedie I have scarcely seen any skylarks (*Alauda arvensis*).

Hooded crows became very common with the first spell of cold weather and large flocks of redwings appeared at the same time.

The little owl (*Athene noctua*) is common, both in the trenches and behind, and no doubt has a good time amongst the

mice that abound everywhere. Kestrels are quite common, but the sparrow hawk is not.

The great tit is very common, mostly of the continental variety. Col. Tweedie saw a yellow wagtail; I was not so lucky, but saw a good number of grey wagtails (*Matacilla melanope*) looking very pretty with their yellow flanks.

I enclose a list of the birds seen by me here, leaving out the migrants that were here when we arrived at the latter end of August.

The girl bunting and greater spotted woodpecker were seen at the beginning of March, in a village some miles south of the district where the other birds were seen.

The list is made in the order in which I saw the birds.

List of birds seen from September till March (1915-16) in and behind the trenches in Flanders:—

Rook	...	...	<i>Corvus frugilegus.</i>
Little Owl	...	...	<i>Athene noctua.</i>
Crested Lark...	...	...	<i>Alauda cristata.</i>
Skylark	..	...	<i>Alauda arvensis.</i>
Great Tit	...	...	<i>Parus major.</i>
Blue Tit	...	...	<i>P. cæruleus.</i>
Moorhen	...	...	<i>Gallinula chloropus.</i>
Little Grebe	...	...	<i>Podiceps fluviatilis.</i>
Kingfisher	...	...	<i>Alcedo ispida.</i>
Hooded Crow	...	...	<i>Corvus cornix.</i>
Carion Crow	...	...	<i>Corvus corone.</i>
Starling	...	...	<i>Sturnus vulgaris.</i>
Blackbird	...	...	<i>Turdus merula.</i>
Song Thrush...	...	...	<i>Turdus musicus.</i>
Redwing	...	...	<i>Turdus iliacus.</i>
Fieldfare	...	...	<i>Turdus pilaris.</i>
Missel-thrush	...	...	<i>Turdus viscivorus.</i>
House Sparrow	...	...	<i>Passer domesticus.</i>
Tree Sparrow	...	...	<i>Passer montanus.</i>
Jay	...	...	<i>Garrulus glandarius.</i>
Magpie	...	...	<i>Pica rustica.</i>
Woodpigeon	...	...	<i>Columba palumbus.</i>



HEDGE ACCENTOR.
(*A. modularis*.)



YELLOWHAMMERS FEEDING YOUNG.
(*Emberiza citrinella*.)

Kestrel	...	...	<i>Falco tinnunculus.</i>
Sparrow Hawk	...	...	<i>Accipiter nisus.</i>
Harrier (? Hen)	...	...	<i>Circus cyaneus.</i>
Robin	...	...	<i>Erithacus rubecula.</i>
Wren	...	...	<i>Troglodytes parvulus</i>
Pied Wagtail	...	...	<i>Motacilla lugubris.</i>
Grey Wagtail	...	...	<i>Motacilla melanope.</i>
Yellowhammer	...	...	<i>Emberiza citrinella.</i>
Linnet	...	...	<i>Acanthis cannabina.</i>
Chaffinch	...	...	<i>Fringilla cœlebs.</i>
Meadow Pipit	...	...	<i>Anthus pratensis.</i>
Bullfinch	...	...	<i>Pyrrhula europea.</i>
Pheasant	...	...	<i>Phasianus colchicus.</i>
Partridge	...	...	<i>Perdix cinerea.</i>
Greenfinch	...	...	<i>Ligurinus chloris.</i>
Jackdaw	...	...	<i>Corvus monedula.</i>
Wheatear	...	...	<i>Saxicola ænanthe.</i>
Gold Crest	...	...	<i>Regulus cristatus.</i>
Green Plover	...	...	<i>Vanellus vulgaris.</i>
Black-headed Gull	...	...	<i>Larus ridibundus.</i>
Wild Duck	...	...	<i>Anas boscas.</i>
Snipe	...	...	<i>Gallinago cœlestis.</i>
Tree Creeper...	...	...	<i>Certhia familiaris.</i>
Hedge Sparrow	...	...	<i>Accentor modularis.</i>
Heron	...	...	<i>Ardea cinerea.</i>
Green Woodpecker	...	...	<i>Picus viridis.</i>
Greater Spotted Woodpecker	...	...	<i>Dendrocopus major</i>
Marsh Tit	...	...	<i>Parus palustris.</i>
Cirl Bunting...	...	...	<i>Emberiza cirrus.</i>
Corn Bunting	...	...	<i>Emberiza calandra.</i>
Reed Bunting	...	...	<i>Emberiza schœniclus.</i>

Rooks are very common, but it is a curious thing that there is no sign of a rookery anywhere; where they nest I cannot say.

THE HEARING OF PHEASANTS AND OTHER BIRDS.

By C. BARNEY SMITH.

One Sunday early in March, about 11.35 p.m., I was walking in a garden in the cool of the evening (testified by a north wind and occasional flakes of snow) accompanied by my wife and other friends. No sound of a train or anything else could be heard, although we were listening intently for a long time. Suddenly a dull thud was heard coming from many miles distant, when at once the wild pheasants in the adjacent woods woke and chattered violently for a quarter of a minute. As soon as they had ceased there came another thud, and immediately more chattering; and so eight times over, when all was still again.

More than half-an-hour later the pheasants' chattering was repeated six times over in precisely the same way, although no distant thud was then heard by the intently listening humans.

So much is common place; but what may be thought of interest is that in the same garden were various other kinds of pheasants—Golden, Amherst, Silver, Tragopan and Monaul—in addition to other birds such as oyster catcher, curlew, spur-wing plover and demoiselle cranes. All these were of course in captivity, but although they give expression to their feelings in varied ways of vociferation in ordinary life, on this occasion they did not utter a sound, nor did any wild bird in the vicinity except the pheasants.

Curlew, oyster catcher, spur-wing plover and cranes are very wakeful birds and constantly heard at night, and I think no one could argue but that they have intense powers of both hearing and sight. Tragopan and monaul pheasants I have found to make loud cries only when suspecting hidden enemies close at hand. The rustle of a blackbird in a bush will send them into a great panic. Demoiselle cranes, as I have often noticed, are most sensitive to a distant echo of their own call. Golden and Amherst pheasants appear to have very quick hearing, and unless tamed when young are very nervous. I suppose the explanation of the silence of all birds, other than wild pheasants is that birds only take notice of what interests them, and wild pheasants fear being shot; more-

over, panic amongst most classes of birds is very infectious, and when one gives an alarm cry the others start at once.

Last January, when distinct sounds of an air-ship's engines were heard one night, both the wild pheasants and all the other birds were absolutely still; subsequently the wild pheasants began calling at intervals in the same way as on the March Sunday evening, and the following day it appeared that numerous bombs had been dropped in the vicinity of a town in an adjacent county.

It would however, in my opinion, be a mistake to think that wild pheasants are only excited in times of Teutonic visitations; thunder, or any sudden sound, will alarm them. Some time since, when there were naval operations in the North Sea and many people (from Cumberland eastward) felt it their duty to record in the Press the alarm of pheasants in their own neighbourhood, I was amused to note that the pheasants in the woods near my house made the greatest outcry of the season *two days before* the naval operations took place, doubtless frightened by some comparatively near sound.

The powers of birds—whether in captivity or otherwise—for hearing and seeing appear simply amazing. Notice the behaviour of a Demoiselle crane when a heron goes over, a mere speck in the sky; notice the difference in conduct in a spur-wing plover between seeing a distant lapwing and any other bird, and then with Tennyson lament:

“Our hearing is not hearing,
And our seeing is not sight.”

COMING AND GOING.

By Miss R. ALDERSON.

Most of us have sent away birds to other homes, or have received them, but to some members, who are just starting bird-keeping, a few hints on providing for the comfort of a bird whilst travelling may not be out of place.

I remember once I was sending away a canary, and a lady friend, who was *not* a bird-keeper, asked me *how* I should send it; if it would go *by post*!

Now while all of us know better than my friend, yet there are many small details to be considered which conduce to a bird's comfort.

First let us take the birds that come. When any bird is being sent to you be sure and arrange with the sender *beforehand* the date and the time of the train the bird may be expected by, and if possible meet the train, or arrange that the bird is sent down from the station at once. Even in a town where there is a public delivery it is not advisable to always make use of it, for the conveyance will probably take a long time delivering parcels, and your bird will be exposed to delay and draughts, which on a cold day may prove fatal. Be sure and have your cage all ready, well sanded, and with a perch of suitable thickness, and fresh food and water *inside the cage* before the bird arrives. If you put these in the cage after the bird is in it you will give it an unnecessary fright. It will conclude in its poor tired little mind that the horrid catching up when it left its home is all to be gone through over again, for birds are so easily frightened, and if we except parrots, are not as intelligent as animals.

If your bird arrives after dark put it in the quiet corner of a room where there is a light (and if in winter) a fire, that the bird may eat and drink and get warm. Avoid coming too much near the cage just at first.

Suppose the bird arrives in a nailed-up box, just with little air-holes, the question arises *how* to get it out into the cage without catching it? The plan I generally adopt is to loosen the lid, forcing it with a screwdriver till it is quite free, but still on the box; then holding the lid still on, turn the box *very gently* on its side and holding it to the cage-door, which has previously been opened, slide the lid away, when the bird generally hops in, and gives no further trouble. If this is done carefully there is no damage, nor any fear of the bird escaping, though in any case I should always close door or windows and put a guard on the fire. Parrots are sometimes tiresome, and will cling to the box and refuse to come out for some time, when it is best to leave them, propping the box behind, so that it does not slip away from the cage.

If it is cold when the bird arrives the cage should be put near the fire, and a cloth thrown over it before the bird is left for the night, as if it has come out of a heated aviary the room will feel cold before morning.

It must be remembered the bird has passed through a trying time ; what with being caught and put in a cramped dark space, and all the trials of being shaken on a journey and continually hearing strange noises. Possibly the bird has been too nervous to eat, and has got chilled, and is in a condition to start an illness, under these circumstances you will see that attention on arrival to little details may make all the difference to the bird's future health and comfort. But suppose the bird already seems ill when it arrives. We all know the signs of a sick bird, the ruffled feathers, and the head sinking into the neck, and the huddled, hopeless way it sits on the cage floor. A very little brandy in tepid water may do good, but I think the greatest stress should be laid on keeping the sick bird warm. Heat is a very great factor in bird-life during sickness. it helps to keep up the circulation which is always feeble when a bird is ill. A fire may be so arranged and backed up with "small" coal so that it will last nearly all night. You *cannot* expect a sick bird to recover unless it is kept very warm, half measures are not the slightest use. A light, too, should be left burning all night, the cage being placed so that the bird is not disturbed by the light and yet can see to eat.

If the bird arrives in daylight and seems well you may turn it straight into your aviary, though it is always a risk. The new comer will be in a tired condition and the surroundings are all strange ; the other birds in the aviary may object to the stranger, and, apart from attacking it, may drive it from the food it needs badly. But after a quiet night in a cage a new bird should be on equal terms with its companions when let out early the next morning, and you will have the whole day to watch if the birds are going to agree. A few hours notice will probably decide this point one way or the other.

It is as well to ascertain before a bird is sent to you what it has been fed on, and to keep to that diet for a little time, even though you think it a wrong one.

In buying birds it is an unwritten law that the buyer always pays the carriage. In giving a bird away, of course the giver would pay it. The sender usually sends the bird in a box that need not be returned and there is no charge made for it. This is one of the

reasons that a box is better than a cage, for the carriage would be more than the returned cage was worth. When a bird arrives by train be sure and put "not examined" as well as your signature on the charge sheet. Unless you do this the Railway Company disclaim responsibility if anything is wrong.

And now as to sending birds away. The same rule applies as to notice beforehand as to what day and by what train you are sending the bird by, and also add what you have fed it on.

I prefer to send birds by night if possible, unless the weather is very cold. For one reason there is less traffic by night, and for another as it is the natural time for the bird to fast it will not matter much if it is too nervous to eat on the journey.


If the bird you are sending is from an aviary it is best to catch it up fairly early in the afternoon, and to cage it till nearer the train time. It is a mistake to enter an aviary, especially to do any catching, after the birds are settling down for the night.

It is better to use an ordinary wooden box for travelling rather than a travelling cage with a wire front. The former needs no paper covering but the latter does, and the railway people *will* always tear the paper "to see if the bird is all right," but more I think from a pardonable curiosity to see what is inside. The paper torn, can you wonder that the bird takes cold? and perhaps reaches you only to die. A proper ventilated box is much better and safer than a cage, and there is no difficulty about removing the bird if you act as previously suggested.

The box must be a suitable one. I remember once receiving some tiny birds from a dealer, who should have known better, packed in a shallow chocolate box with no perch. The poor little birds having no grip on anything, and doubtless having been badly shaken about, arrived in wretched condition. Then again, I once had a number of little birds sent to me without anything in the travelling cage to allay their thirst; some were dead when they arrived, and I think about one only survived. Birds suffer more from thirst than from hunger, and to be without fluid for twenty-four hours means probably death. This is not surprising when you think that a man can live forty days without solid food *if he has liquid*, but stop the liquid entirely and he will die of thirst very quickly, ten days being

the longest time on record, but seven is more the average duration of endurance.

The size and shape of the box must be determined by the kind of bird sent. "Bournville" cocoa boxes are one kind that I find very useful. The box must be deep enough for the bird to stand comfortably upright when on the perch, but not high enough for it to fly or jump upwards to hurt its head. In the case of very nervous birds that *will* try to do this I use a box without a lid, covering the top with canvas or hessian tacked down, so that the bird cannot injure itself. The canvas must not cover only the top but must come right down the ends and sides. Once I was sending away some restless doves, and knowing no better I cut my canvas only a little larger than the box top. In a short time the birds had almost burst it off with jumping up—the canvas fraying—and I had to pack the box over again before it was safe to send them.

The box should be ventilated by sawing the V-shaped pieces off the top corners, *not* opposite to each other (to avoid a draught), or the lid may be nailed on in the pieces leaving a little space between, but as the label will partly cover this the side ventilation is better. If your lid is in two pieces, nail on the first half before slipping the bird inside. Be sure to remove all splinters and projecting nails, and hammer down all points that may come through ever so little. Fold a piece of brown paper the size of the bottom of the box to line it, then put your perch across, nailing it with nails through the outside. Be sure it is a suitable thickness so that the bird can grip it, and place it just above the cage bottom so that there is no fear of the bird getting wedged underneath. A handful of seed should be put inside the box and a place made for the soaked bread. You may either tack in a chip pill box, or shape a strip of cardboard thus  (half cutting through where you bend it) and tack it at each end. In any case be sure and do not put the bread in *loose*, it will become dirty and uneatable, and may give the bird cold. When getting a travelling box ready I put the piece of bread to soak before doing anything else, then by the time the box is finished the bread has taken up enough moisture to retain sufficient, even when the surplus water is squeezed out.

Do not put hay in the bottom of the box or the bird may get entangled and break its leg.

Have everything done, and nails, label and string at hand before you catch the bird. Examine it before putting it in the box, to see if it is in proper condition, or if its nails want trimming. Where several birds are to go in one box the lid should be loose and laid on the top, just sliding it back a little way to admit each bird. It is as well to put your hammer or some other weight on the top for fear the birds already caught should jerk the lid off, whilst your back is turned, and escape.

It is not safe to mix up big and little birds in the same box, and were I sending a number of birds of the same kind I should think it wiser to pack the hens and cocks in separate boxes. *Safe* packing is always worth a little extra trouble and expense.

The birds safely in, the lid is now tacked on, and the label (which should be made out in printed letters, giving address, date and train), pasted on the top. Put on the label before the string or you may have difficulty in passing it underneath. I always prefer stick-on to tying-on labels. Some very suitable ones can be had from "Cage Birds" office at a small figure, printed in red and gummed. In storing labels be careful to put nothing on the top of them or the weight will cause the gummed backs to stick together.

In the case of valuable birds it is worth while to insure them. Take them to the station yourself or send them in ample time before the train, the clerks and porters will do the rest for you. The railway servants and officials here are very kind. They will look me out trains, telephone when a bird has come, and send it down by special messenger if possible for a small fee. The gift of a bird, or the invitation to look round the aviary is much appreciated, and makes things—as they ought to be—on a pleasant footing. There is sometimes an amusing side too. A pair of scolding Tasmanian sugar squirrels that once came for me made such a noise that the whole station staff were puzzled and curious to know what they could be, the hissing sound being like an angry cat, and one man declared that "he would'nt care to put his hand in that box, not for a thousand pounds"

One word in conclusion. Do not entirely trust strangers in birdy transactions, and refuse to send birds on approval, unless the prospective buyer will take full responsibility and return the bird at once, in as good condition as when sent, so far as that is possible.

NOTES FOR THE MONTH.

By SECRETARIUS.

MAY.

[A member of the Society has kindly undertaken to write monthly notes, which are chiefly intended for beginners].

By this time most of our birds will be put out in their summer quarters. If possible there should always be two sets of quarters, viz., summer and winter. If not, the ground gets absolutely stale, with the inevitable result that sooner or later disease will crop up and kill some valuable birds, if not the whole lot. Another advantage is that the winter quarters can be cleaned and whitewashed. Also one can catch any mice or other vermin. If the winter aviary has been heated this will have been discontinued during the latter part of April and all windows and doors opened during that time when the sun is bright. Practically speaking, all waxbills, grassfinches, firefinches, and nearly all softbills can be put out in May without much risk. It is not the cold at nights that kill birds. It is the *long* cold nights that kill them. When putting softbills out, be sure and put their food in the same kind of vessel that they have got used to. In a natural garden aviary the soft food bill will at once show a welcome diminution. We will take it that the summer shelter has been cleaned, fresh perching accommodation supplied and all nesting receptacles taken down and thoroughly washed with disinfectant. Many young birds are lost through the birds using old nesting sites. While making nesting boxes, &c., two things are important. One is to have one side of the box to open so as to examine the contents and the other to have the roof projecting a good three inches all round to protect from rain and to some extent the bright sun. Study last year's nesting sites and find out their favourite places. Pull all old nests down out of the shrubs.

Many birds will give up nesting rather than nest in an uncongenial place. They seem to prefer to face the light provided it is not too strong and glaring.

Don't spoil a season by putting in spiteful and interfering birds. In one instance an entire season was spoilt by a very inquisitive pair of fruitsuckers, who always became most inquisitive as the young began to call for food, *i.e.*, just when they were beginning to feather. Odd birds of any kind are simply taboo.

All birds should be properly paired and ringed so that they may be instantly recognised. It sounds a trouble, but experience has shown that if one doesn't there is ten times more trouble ahead, and sooner or later one will make a mistake and part with a valuable breeding bird and be kept with possibly two cocks or at the best father and daughter or mother and son.

Don't expect patriarchial birds to breed even if they show every attention to the opposite sex. Even human beings are apt to make themselves ridiculous in this way. Have nothing to do with birds with scaley legs, bald pates, swollen feet, deformed limbs. They are dear at any price and seldom if ever breed. Only 100 1 + 1 for the breeding aviary please.

In nature hardbills feed on the ground, thereby ingesting grit. Grit is food for them. (*Verb. sap*).

With regard to the flight. Every flight should have a good open space in the centre with good gravel or sand on the ground. Don't convert your flight into a Hampton Court maize or an Indian jungle.

Trek such soil as is left lightly over and sow what seeds you have a fancy for. Remember the true finches will destroy all vegetation as easily as parrakeets, and it is useless trying "to keep the house well" with these big beaked marauders about. Weavers are nearly as bad, but grassfinches and softbills do know how to behave themselves in a private garden.

Carefully run over the netting especially if snow has weighed it down. Holes will be near the supporting parts or where trees are growing through the netting itself. Every aviary should have a bird bath. It can be made very easily and cheaply as a shallow concreted and cemented depression in the ground. A soak away may be added

if you like; it is not necessary at all. Let it be placed in full view of any spectators. It will be an endless source of amusement at about 9-10 a.m. every morning.

Finally, if possible keep your flight flooded with sunshine, plenty of air, and no dark corners. Not too much boarding up or you will lose the sunlight, unless you use glass shutters. Your birds will never be too dry. They will easily suffer from too much damp.

Next month nesting sites and materials will be dealt with and other matters that will arise.

CORRESPONDENCE, NOTES, ETC

FEARLESSNESS OF GOLDEN CRESTED WRENS.

I was standing guard over my Palm Dove's seed dish to keep off the sparrows while he fed, and at the same time was watching a couple of Gold Crests squabbling in a spruce close by. They presently closed and alighted on the ground about a yard from me abusing one another and displaying their crests. Then they suddenly rose, flew on to my arm, doubled between it and my body and for a few seconds one was actually in my hand and the other clinging to my sleeve objurgating each other. Then they flew off to continue the quarrel in another tree.

ETHEL F. CHAWNER.

SIR,—It may interest members of the Society to hear that this morning I watched a Wren "working" a birch tree in exactly the same way that a tree creeper would, the only difference being that he carried his tail up and depended solely on his feet and legs for support, and that he also worked down the trunk with apparently equal ease, thus proving the usual statement in books, that the Nuthatch is the only bird that can work down a tree trunk, to be untrue. I watched the bird at about six yards distance for ten minutes. It was, I believe, a cock, for while he was working the birch there was another Wren pecking about on the roof of a shed near by, and when he left the birch he flew to the roof and commenced to sing.

HUGH WORMALD.

SUPPOSED TROUPIAL.

Dr. E. HOPKINSON suggests that this bird (see p. 122) is the bobolink.

CORRECTION.

P. 116—last line but one of the article of the Vinaceous firefinch—*West* Africa should be read for East Africa.

A SPRING MIGRANT, 1916.*Written expressly for the "Avicultural Magazine."*

To-day I heard the willow-wren
 In song by Ashford Ripple: then
 In joyous cadence from the combe
 A thrush made answer "Welcome home!"

* * * *

Where is thy home thou voyager
 From that last Libyan forest-spur?
 For thou has seen the camels ply
 Strung out in desert Tripoli,

And through the palms—a silver net—
 The moon upon the minaret,
 And dared the amethystine deep,
 And passed the cities in their sleep.

And thou hast watched the dawn caress
 The temples and the cypresses,
 And felt the quivering heat that moves
 At noonday in the olive groves.

But now the cry of battle rings
 Beneath thy dainty flutterings
 O'er land and sea, and through the skies
 The armed bird of warfare flies.

Bearing its human lives (as when
 The fabled eagle bore the wren),
 And looking from the zenith-height
 On deaths abysmal, infinite.

The mine, the cannon and the flare,
 The raucous rending of the air
 Beset thy way, and more than these,
 These and a thousand sadnesses—

The treeless woods, the blighted grass,
 The crosses where a battle was—
 Alas! thy dear refrain might be
 (For wistful love) an elegy.

* * * *

Nothing could daunt thee! Ever shone
 The vision of the halcyon—
 Of Ashford Ripple and the combe
 Calling thee northward. Welcome home!

A. T-B.



THE PINK CRESTED TOURACO.
(TURACUS ERYTHROLOPHUS).

(From living birds in the possession of Mr. Hubert D. Astley.)

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BREEDING OF BUFFON'S TOURACOS IN FRANCE.

Turacus buffoni.

By MONSIEUR JEAN DELACOURT.

[*Translated from the original French article sent to the Editor.*]

In the month of April of 1914, Monsieur Robert Pauwels let me have a pair of Buffon's touracos which he had retained after the sale of his magnificent collection of birds at Everberg (Belgium). He had had these birds in his possession for some years.* They were in beautiful condition, but had never yet nested in his aviaries. Directly they arrived at Villers-Bretonneux, I installed them in an outdoor aviary, the dimensions of which are 12 metres long by 4 in breadth, enclosed by walls on the north, east, and west. This aviary, which is planted with shrubs, communicates by an inner compartment (3 × 1 metres) with the heated passage, and has a glazed shelter (2 × 1 metres) running the length of the north wall. Within this shelter I fixed up a square nesting-box, close to a perch, with a hole in one side sufficiently large to permit the touracos to enter, a similar box being placed in the inner compartment. The birds immediately took to the glazed shelter and passed the night in the box, seldom visiting the inner compartment. They were very fond of flying from one end of the aviary to the other, and of running along the branches. I think it would be impossible to keep this species in good health in a cage or in quarters too restricted.

* Mrs. Johnstone sold these birds, or certainly the female, to Monsieur Pauwels, and they had previously bred in her aviaries at Burrswood.—ED.

In June, two months after their arrival, I found on some straw in the nesting box beneath the shelter, two round white eggs the size of those of a golden pheasant. Male and female incubated them alternately, and in 18 days two young were hatched. They were covered with black down. The parents took great care of them, but on the eighth day I found them dead upon the ground. I fancy it was the father who had done the deed, with a desire to start nesting operations again, as has happened before now amongst my birds, such as "*Acridotheres*" and species of *Garrulax*.

Three days afterwards two new eggs were laid in the same nest, which was always kept beautifully clean. The young were hatched in the month of July. After a few days, one was found dead on the ground. I then removed the male bird from the aviary, but his mate at once abandoned the remaining young one, which died. The parents showed great distress at being separated, and evinced a thousand signs of pleasure when they were reunited. It was just then that war was declared, and I left Villers-Bretonneux on the 1st August (1914). I remained without news of my birds until the end of September, only knowing that the Germans had arrived at my home on the 30th of August, and had been driven out on the 12th of September, without having done great damage to my aviaries. (They had, however, killed a white Rhea, some rare waxbills, some sunbirds, etc.)

In the month of October, my Mother, who occupied herself actively in my absence with my birds, wrote to me that the touracos had again laid in the month of August, and the young ones had been born during the Germans' invasion! One was dead, but the other was then more than a month old. The parents had taken good care of it, the male bird having done it no harm. The nestling lived until November, but it was rickety, with malformed feet. It died. The parents were then placed in the heated compartment until the following May.

The following are my Mother's notes on the touracos during 1915 :—

In the month of June, the female laid two eggs in the same nest as in the preceding year, and two young ones were hatched. They were thrown out and found dead on the ground after a few

days. The second clutch was laid immediately, and two young were hatched on the 10th and 12th of August respectively. This time the parents took good care of them, and on the 5th of Sept. the strongest of the two left the nest and was found perching upon a bush. It was still very small, and covered with black down, and lacked the crest. But it flew fairly well, as it had some partly-grown flight feathers which were black in colour; and returned every night to the nesting-box.

On the 20th of September its crest began to show, and its feathers grew, some red quills appearing in the wings. The other young one was rickety like that of the preceding year, and never left the nest. It died at the beginning of October.

By the 10th of October the length of the surviving young one was two thirds that of its parents, and its green feathers replaced the black ones.

On the 15th, the red circle showed round the eyes, and a few days later the white mark was visible. At the end of October my Mother put the young bird and its parents in the heated shelter with their nesting-box, in which they continued to pass the night.

When I went on leave to Villers-Bretonneux in January 1916 I found the young touraco exactly resembled its parents; the three birds were always very united, and the parents allowed the young one to take the pieces of banana which were given to them, first. These birds, although very quick in their movements, are friendly and eat out of one's hand.

The young touraco began to feed itself at about the age of six weeks; the two birds fed it by regurgitation, after the manner of pigeons and parrots. We always give our touracos the same food even when they have young ones: namely bananas, potatoes chopped in pieces and dry raisins. They have never eaten mealworms or bread and milk. I have never seen them hunt for insects, and I believe them to be purely frugiverous.

To avoid the deaths of so many young ones, I have for the coming season placed beneath the nesting-box a platform covered with hay, where the little ones will be received instead of tumbling to the ground when they are pushed out of the nest. An attempt will then be made to rear them by hand. I hope to succeed, because

the young ones were never maimed by their fall, and I think they died from exposure and shock.

It seems to me certain that the first brood will never succeed with their parents ; it is only the last one which they will rear when the ardour of the male is tempered at the end of the season, as has happened in the last two years.

To sum up, this is what my pair of touracos have produced :
1914. Three nests. Six eggs. Six young ones, one of which survived for two months.

1915. Two nests. Four eggs. Four young ones, one of which lived two months, the other has become adult.

* * * *

EDITOR'S NOTE.

Monsieur Delacourt most kindly sent a water-colour drawing, painted by himself, shewing the two touracos (with the young bird in the nesting-box), but as a coloured plate of the pink-crested touraco had already been completed, and as our funds do not permit of two coloured illustrations, we have inserted the plate of the pink-crested species as an accompaniment to Monsieur Delacourt's article. The species he possesses have the crest, head, neck, and body, green ; the wings and tail being shot with violet, the flight feathers being crimson as in the pink-crested touraco. In Buffon's, a white line runs under the eye and in front, divided by black.

We are not only glad to welcome Monsieur Jean Delacourt as a member, but are also grateful to him for his most interesting article, and hope to have further accounts of some of his birds, of which he has an exceedingly fine collection, including 22 species of waders, cranes, etc., 51 species of waterfowl, 46 species of pheasants, 20 of pigeons and doves, 17 species of parrots, and 95 species of various passerine birds. Monsieur Delacourt's property—Villers-Bretonneux—near Amiens is a regular ornithological park, situated on the hills of Santerre, and dominating the valley of the Somme.

THE LYRE BIRD.

(THE AUSTRALIAN MOCKING BIRD).

By EDWIN ASHBY.

(Supplied by Mr. Frank Finn.)

While American writers speak proudly of their mocking bird, we in Australia have probably the cleverest mocking bird to be found in any part of the world. The first question my readers ask is no doubt "What does it look like?" In size it is quite as big as a white leghorn hen, with a very much longer tail, longer legs and very long tapering claws; in the specimen now lying on my table, the hind claw is over $1\frac{1}{2}$ inches long. The claws and strong feet are of great use to the bird in scratching for insects, beetles, grubs, and snails amongst the fallen tree fern fronds and dead sticks with which the ground is thickly covered in the tree fern gullies which form the true home of the lyre bird. The colour of the bird is dark grey on the underside and the upper and tail dark olive brown, a shade of colour that makes it difficult to see the bird amongst the thick shadows of the undergrowth.

The name lyre bird is not given, as some of my small friends have thought, because it deceives other birds and people by pretending to be what it is not, if that was the reason its name would be spelt "Liar Bird," but it is named after a musical instrument called a lyre, owing to the cock bird having a most wonderful tail over two feet long, in which the two principal feathers are shaped like the musical instrument of the same name. The tail of the hen bird is 18in. long and the two outer feathers are half the length of the feathers in the cock's tail, but are banded with chestnut and transparent bands and are of the same "lyre" like shape as the outer feathers in the cock's tail.

Now about the home of the lyre bird, I am sorry to say that we have none in South Australia, although we are trying to get the Government to introduce them on to Kangaroo Island, where they will be free from the danger of foxes.

You must come with me in thought to the Mount Dandenong Ranges near Melbourne, or better still, to the wet, big tree country in Gippsland, about 100 miles east of Melbourne in Victoria. There

the gum trees grow to the height of 300 feet, with a dense undergrowth of smaller trees and bushes, that make it very difficult to push one's way through the scrub. In fact in one spot I found that the wallabies had made their runs on the top of some low bushes that were matted together with a sort of wiry grass, I had to take the same path as the wallabies, but my legs now and again slipped through into space which was very awkward. This country is cut up into a great number of little steep-sided valleys, the sides covered with masses of glorious ferns, and the bottoms, where the burling brook of clear water ran in and out and over the tree fern stems, was a perfect canopy of tree fern fronds, the fern trunks standing like pillars, each stem festooned with the delicate drapery of filmy ferns, and some six to ten feet above our heads a ceiling of delicate green composed of the fronds of the tall tree ferns. This country then is the favourite home of the lyre bird. My visit to this spot was paid in the end of July. I was awakened in the early morning with the loud but musical cries of a cock lyre bird, the sound coming out of the deep gully below the paling hut in which I slept. The night had been frosty, and as I entered the gully each delicate fern frond glistened like gems, and at the tip of each of the filmy fern fronds was a little ball of ice, which as soon as the sun was up began to melt and gave one a real early morning shower bath. At that time of year the lyre birds are mating, and it is the custom for the birds to congregate at a fixed spot in the scrub, where there is sufficient space in the scrub for the cocks to show off before the admiring gaze of the hen birds. One such spot, ten to fifteen paces across, surrounded with a wall of saplings of hazel, musk, and other tall bushes or small trees, was shut in on the creek side by a large bramble bush. I was able to stalk a cock lyre bird who was performing on his 'seat,' or more correctly, his 'scratch,' a slightly raised mound in the centre of the open space. It took a long time to reach the spot because one could only move while the bird was singing, or more correctly, calling: the second he stopped, even if one was standing on one foot, it was not safe to put the other foot to the ground, because the least snap of a brittle fern stem or stick under one's foot would be heard by the cock bird, whose hearing is very acute, and he would warn the hens and away they all would

go, all I should see would be a streak of brown amidst the green of the leaves or the dark shadows of the bushes.

By dragging myself along on my stomach, I managed to get within the shelter of the bramble bush, about five or six yards away from where the cock bird was performing. The hens were either perched low down or standing in the shadows of the mass of tall bushes that surrounded the open space, watching the performances of the male bird; whether more than one male bird took part I could not ascertain. The proceedings were much as follows. I have no notes taken at the time and I may not now remember all the birds that were imitated on that particular occasion, but the following were some of them.

After a few moments of dead silence I heard the whistling notes of the harmonious song thrush, both the run of four notes, so familiar to all who visit the Australian bush, and which has given the bird the local name of "Bob Bob Whitehead," and in addition were some of the other whistling notes of the same bird. After repeating these notes a few times there was a dead silence, when from the 'seat' burst forth the hearty laugh of the laughing jackass, followed again by a rather lengthy pause, the cock bird listening and the hen birds bestowing on him their admiring gaze and humbly awaiting the warning of the cock bird, before presuming to attempt to escape from any threatened danger. On being satisfied that no lurking danger was to be feared, the cock bird burst forth in the wailing cry as "of some lost spirit," which is the note of the great black funeral cockatoo, followed as before with a dead silence. And then a strange rustling sound and a noise of scratching came from the other side of the sheltering bush. Had I been able to see as well as I could hear, this is what would have met my gaze. The lyre bird spread his magnificent tail, then shook and rustled it, which caused the sound I was listening to, all accompanied with scratching and various antics. This was followed by the sweet, full notes (which always remind me of the notes of the nightingale) of the yellow-breasted thickhead. Several other of the bush birds were imitated, and amongst them was the shrill squeak of the grey crow shrike, and I think the wattle bird was another, though I cannot now recall them all; interspersed between all this mimicry

were the rich full notes that may be called the lyre birds true song. So perfect was the imitation that I could not distinguish any difference between the notes of the rocker and those of the birds whose cries he had been so successfully imitating, had I not been so close to him I should have been quite deceived. On my disturbing the gentleman in his performance, he gave the hens warning and several of them flew over the tops of the bushes down into the gully. Owing to their wings being feeble, short, and round, it is evident that the birds depend more upon their legs for escape from any danger than upon their wings, therefore it is quite unusual to see them fly. The easy, graceful manner in which I have seen a cock bird step, apparently without effort, from the ground on to the top of a gigantic fallen log, makes one compare the legs to steel springs.

Last October it was my privilege to spend a week on the slopes of Mount Dandenong, and although it was not the season for the lyre bird to call, on most mornings I was able to get a sight or hear their cry soon after sunrise. On the last morning, as we were driving through the township of Mount Dandenong, we heard a strange sound coming out of the head of a gully that takes its rise in the township itself. The noise sounded almost like someone knocking a piece of wood, the driver told us that it was a cock lyre bird that always frequented that particular gully, although so close to the houses. He said that it imitated all the various sounds of the township, especially the crowing of the roosters.

Some years ago I was visiting some hilly country near a place called "Bembo" in New South Wales. The country was very similar to the Stringy Bark ranges of the Mount Lofty Hills but rather dryer, less underbush and no Tree Fern gullies. I was most pleased to find that lyre birds were not uncommon there, and I saw a nest that had been built in a burnt-out stump about four feet from the ground. The foundation was earth or clay, quite possibly the clay had been conveyed there by ants and that the lyre bird had chosen it as a nesting place afterwards. The nest was made of twigs arched over. Only one egg is laid and the more usual nesting place is on the ground under some overhanging fern or some well hidden spot. The foxes are likely to destroy this wonderful bird from the mainland of Australia. The gentleman I was with near

Bembo told me that one day he and his son thought they heard a miner knocking off bits of quartz from the reefs that abound in that locality, hunting for gold, that is known by the miners as 'knaping': while a couple of years or so before there had been hundreds of miners in that district hunting for gold he had seen no one for a long time, so my friend and his son strolled off the track to see who it was, when judge of their astonishment when they found it was a cock lyre bird that was imitating the sound made by a miner knaping. It has been recorded that some birds that were quite tame in a place in Gippsland used to imitate the sound of a heavy wagon passing over a road made of small logs placed close together and called a corduroy road. We may therefore be very proud of this wonderful bird, and very glad that Australia possesses the most wonderful bird mimic in the world.

THE IRRUPTION OF WAXWINGS INTO NORFOLK DURING THE WINTER OF 1913-14.

By J. H. GURNEY, F.Z.S., M.B.O.U.

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The first waxwing, of which any record was handed in for the counties of Norfolk and Suffolk, was a fine crested bird sent to Mr. Arthur Patterson on November 15th, 1913, a date ten days later than for Yorkshire. After that, for two months or more, waxwings kept on coming, as it were in waves, and until well into February they were to be seen, singly or in small flocks, in both counties. At first they were met with in parishes near the sea, and in one instance Mr. H. Cole saw a flock at Cromer in the act of arriving (November 15th), but they soon made their way inland. They appeared to be hungry birds, not only after their voyage, but by nature, in their eagerness for berries freely entering villages, and not being afraid of the outskirts of such large towns as Norwich and Cromer. At Norwich a small flock actually got as far in among the houses as St. Giles' Gates, and one came down the chimney of Dr. Mills' house in Surrey Street into a drawing room, where it was promptly captured. The same indifference to man

was remarked in Belgium, where Mr. Coopman found them "venant même voler sur les boulevards de la ville de Verviers, tels des étourneaux familiers" (Rev. Fran. d'Orn., 1914, p. 327), and it is evident that that habit is general. Tameness, however, is a characteristic of the waxwing in its native country, and I remember, too, remarking it in some which were in confinement. Their fondness for drinking is also a *trait* which will not fail to be noticed; house gutters were made use of by the little flock of five or six which frequented Earlham Road, and the river brink by a pair at Trowse Bridge.

It is difficult to say how many waxwings really came to Norfolk, but certainly the presence of at least a hundred and eight was announced. Fortunately most of them were seen (not shot) by observers who were content to spare them, so very likely a few were counted twice over. The last announcement of their presence received from Norfolk was from Mr. Russell Colman, who ascertained that the survivor of a pair which were located on some hawthorns near Trowse Bridge at the beginning of March remained there until April 5th, 1914. Mr. Colman employed a man to watch it, but it was not seen later than that, and must have either died or migrated. Many waxwings were also seen in the north of Suffolk, and their presence registered by Mr. C. B. Ticehurst, Mr. Saunders, and others who were looking out. Undoubtedly the total for the two counties exceeded anything since the waxwing winter of 1866-7, when Henry Stevenson reckoned up a hundred and forty-four specimens (Trans., N. & N. Nat. Soc., Vol. III., p. 326). But even that visitation cannot have been so great as the big rush in the winter of 1849-50, the earliest irruption of which any complete record is preserved. This time the front of the waxwing army has left its mark over the greater part of Western Europe, certainly from Norway to the South of France (I heard of some near Hyères), throughout Belgium and Holland (*see* "Le Gerfaut," 1914, p. 74), and in many parts of Germany.

To what cause are we to turn for so universal an irruption? In all probability there had been one or more unusually prolific breeding seasons over some wide area in Western Siberia or Northern Russia. Another, but less likely, solution of their presence is failure

of food supply in those quarters ; but waxwings are omnivorous, no sort of berry seeming to come amiss, except the holly. Examples dissected by Mr. E. T. Roberts, of Norwich, had been eating elderberries, bullaces, and hawthorn berries.

SOME EXPERIENCES WITH BRITISH SOFTBILLS.

By L. LOVELL-KEAYS.

After many weary months the winter is gone and I doubt if any of us wishes for it back. I am sure I don't. With the departure of winter and the advent of spring one's thoughts turn, if we are bird-lovers, to birds. Silently I creep round my vacant aviaries. The very trees in them seem to have taken ghoulish shapes upon themselves. The nests, with which were associated such lofty aspirations, such fluttering anticipations, wondering whether one would succeed or not, these nests seem to reproach one and an inarticulate voice cries out with unheard whisper, "Where is my owner?" Alas! I know not, and I hate the man who "claimed"—odious term!—my favourite birds. I long to see them in their new quarters, and wonder if their new owner will tend them as I did or leave them to some hireling. But away with vain regrets. No need to bemoan the past or speculate on the future. The present alone is ours. How shall we fill these aviaries?

Last year I asked myself the same question and I answered it in this way. Why not keep some British softbills? The idea was fascinating. Just fancy listening to one's own private nightingale and enticing your pet blackcap to come and warble to you! In imagination the Garden of Eden was already mine. My main aviary is large, fully 70 feet long by 30 feet wide, with a tiny stream running through (but alas! not in mid-summer) and literally teeming with insect life. How utopian for our avian prisoners! What a Mecca for our feathered friends! A high-class weekly bird paper was purchased and consulted. For a modest sum I could satiate my wildest thirst for British softbills. Just for a start I wrote for nightingales, redstarts, blackcaps, blue tits, yellow wagtails, long-

tailed tits, golden-crested wrens, whinchats and garden warblers. Reedlings I had already and they nested and reared with me.

I would fain draw a veil over these various birds, but I have always held that one only learns from failures and not from successes, so if my readers will follow me very closely and then go away and do exactly the opposite they will probably succeed where I failed. Perhaps I might add a few waders to my list of "soft-bills." I had dunlin, green plover, ruffs and reeves, godwits, knots, &c., all of which I found ridiculously easy to keep, and why it is the Zoo. cannot keep them passes my comprehension. I have found that all waders are passionately fond of small bird-seed and of course earthworms. For the rest I fed them on the insectile mixture that the other birds would not clear up. I had no time to collect sheep's hearts, liver, lights, &c., cook it up and convert the whole into a kind of "paté de foie gras" for my birds, as recommended by some. My fare is a good boarding-house fare necessitating a keen appetite for its enjoyment. Redshanks I find hard to "meat-off" and required endless mealworms at first, and right up to the end I found they would not do without plenty of live-food, and they generally lost the colour of their legs.

But "*revenons à nos moutons*," how about these soft-bills? Of course they were all "well on food" when I bought them, so seeing the inside of my aviary was teeming with gnats, flies, &c., I simply turned them in and the poor garden warblers just as simply committed suicide. It was pathetic to see them trying to escape. They never attempted, as far as I could see, to look for food. Their troubles and trials were very soon over. Next the whinchats succumbed. For a day or two they lived on the live food in the aviary, but even in a 70 ft. aviary you can't go on for ever, so about the third day after they arrived they were gathered to their fathers. I need hardly say I did not put all these birds in at one fell swoop, like the animals going into the ark "two by two," but the stocking occupied several weeks and months. As a matter of fact the first birds I got were a pair of that exquisite little sprite the golden-crested wren. They lived for a week or two after being let out and I can't understand now why they died. They were well meated off, but I fancy I did not cut up their mealworms after they were

allowed their liberty. But for the market value of them I would rather have a good pair of golden-crested wrens than some kinds of sunbirds. Their legs are simply filamentous and apparently not strong enough to support a soap bubble. Their eyes are about as big as a pin's head and nearly as sharp as the point. Their tiny little beaks are almost microscopic. Altogether they should certainly be classed as dollhouse birds, seeming too small to be let loose in this great big world of ours. By-the-bye so many quite good aviculturists seemed to be unaware that the cock has a fiery-coloured crest and the hen a pale yellow. One notability told me I had a fire-crest! Don't I wish I had! When I wrote and *complained* (please note the irony of the word) Mr. Galloway, who sold them to me, smiled. I wasn't there to see it, but knowing him as I do now, I can quite imagine it. After simply revelling in my charming dainty little golden-crests for about three or four weeks, one hapless morn I missed the cock and a few days later the hen. I cannot describe with what a heavy heart I went about my work that day and kept on comparing the brawny hand of the labourer with the tiny feet of my little friends. Alas! I am still without *Regulus cristatus*, but Mr. Galloway has promised to do his best for me this autumn.

My long-tailed tits gave almost as much joy, and I am glad to say lived all through the summer until late in the autumn. My experience is that they are wee sensible birds and always use a shelter at night-time, and I think I was wrong in not taking them in in November. Live food gets very scarce then and one notices they are very active in nature, and in a short time will seem to scour a wood from one end to the other as quick as one can keep up with them. I have two pairs of them now and I quite hope to keep them all the winter this year. While talking of wintering birds I must say that this year my experience with the smaller birds, although very much more limited in numbers and species, more than bears out my previous contentions. But I must not start on that subject or I shall get into a kind of yolk of egg condition. I shall see everything through smeared and coloured glasses. Nightingales are not difficult to keep up to a certain point. Once really meated off they are quite easy to cater for, but I lost my hen before Christmas and sold the

cock. That cock was more to me than any other bird and I have never forgiven myself for turning him into *filthy* lucre. I believe some human spirit had migrated into that bird. He was so perfectly human. He would follow me just like a dog, and once when I reproved him with a stone for being too greedy he gave me a look of reproach that only Gelert could have given his master. I can only hope he is alive and well and won't think too hardly of me. When I sold him I thought, and had every intention, of giving up birds and going to "the Front." Even now I cannot write of my dear little Nightingale without feeling a little chokey. I cannot trust myself to write any more although I could fill a book of his little ways.

Blackcaps are the easiest of all softbills to keep. They are so largely frugivorous that if you give them a banana they will live on it. They are very retiring birds but a model of grace and beauty. And their song is of distant lands, of love, and of the running waters. They are indeed straight from the presence of the gods on Mount Olympus. I shall certainly get more Blackcaps. I sold mine to our Editor, together with many another favourite, and I know they will be well cared for with him. A real bird-lover is an unmistakable person, and like the poet he is "*nascitur non fit*."

The black redstart is as handsome a bird as you could wish to have. If it was rare one would not hesitate to give ten or twelve guineas for a pair. Mine were thoroughly used to confinement where I put them and I had no trouble in keeping them. Also by the time I got these I began to gather in a little wisdom. I came to the conclusion that all these birds died because they were not meated off at all, in the truest sense of the word, and in the second place they perished because they never found the food. And, thirdly, if they did the old hands swooped down and having consumed the tit-bits left the "husks" for the new comers. My plan of treatment is now as follows: I treat all birds received as fresh caught. I give them an abundance of live food mixed with the insectile mixture and keep them in a cage right away from myself and other people for two or three days. I then let them out in a small bird-room where there are two or three dishes of food left about. Next I let them out into quite a small flight with exactly similar food dishes in it. Then, finally, after two or three weeks I

turn them into the large flight. My birds then live as a rule. But simply to turn them straight out is about as useful as putting them in a small room with a hungry cat and very nearly as rapid.

Wagtails are fairly easy to keep, and I need hardly say most fascinating. In Sussex they call them "dish-washers,"* I cannot say why. I am rather sceptical about their murderous tendencies. I have kept and seen them kept with all sorts and conditions but never came across a murderer, I hope I shan't. I am going to risk another pair when opportunity occurs.

Blue tits are the easiest of all to keep once they settle down, but more die at first than some aviculturists, in other respects quite trustworthy, would lead you to believe. As to their being murderous I simply don't believe it. I have had at least a dozen or more and never detected the smallest tendency even when other of the inmates have looked and been seedy.

Whinchats, I must say, I enjoy far more on the downs in Cornwall and in "the Island" than in an aviary. Still I did keep some for a few months, but I never succeeded in keeping them through the winter. Those hairy gapes bespeak trouble and you will be a good aviculturist if you can bring your whinchats through the moult. Live food is of course the trouble and about Christmas mealworms were impossible to get for love or for money. Whinchats are full of character and I mourned the loss of them. I shall try again.

While writing of British softbills one might mention blue-throated warblers with their almost royal blue throats and dainty carriage. They are fearfully pugnacious *inter se* and one has to keep them separate. Mine all succumbed quite quickly except one and he died of bad feet eventually. This foot trouble is rather a bane with bird-keepers. I fancy it is usually contracted when the birds are first caught. I believe it is highly contagious and one should avoid birds with swollen feet. Improper diet aggravates it. Dirt seems to be the chief cause of it.

I must close a somewhat long drawn out article with a firmly expressed wish that dealers would not sell recently taken birds as "acclimatised," "well on food," "thoroughly meated off," &c., &c.

* In Italy "la lavandaia," meaning the washerwoman, since the women wash linen on the shores of lakes.—ED.

It is not only dishonest, it is misleading, and only leads to utter disappointment and is more likely to make a keen beginner give up birds, or at any rate softbills, than anything else. It is with a view to helping and encouraging others to keep the most fascinating birds in the world, viz., British softbills, that I have allowed my pen to run away with I don't know how many pages of foolscap. Forewarned is forearmed, and forearmed generally means success.

I must not extend this article any more, although there is much I should like to write about my avian friends. I only hope they have forgiven me for selling them (in some cases at any rate) into bondage merely to deck the show bench and be gazed at by open-mouthed humans. Even worse things may have happened to them. They may have been colour-fed for instance, or alas! it may be a case of *Mors et præterea nihil*. "*Absit omen*" is the only possible reply.

STRAY NOTES ON THE BIRDS OF THE COUNTRY-SIDE (MONTGOMERYSHIRE.)

By G. E. RATTIGAN.

The following are some very rough notes on the different species of birds I have so far been able to identify since my arrival here some three months ago. They were never really intended to see the light of day and were merely jotted down for my own amusement, and it is only the urgent call for copy from our energetic Editor that brings them forth.

I hope that, having given this explanation, my readers, if there are any, will deal leniently with me and my numerous shortcomings, for I am only too fully aware that my knowledge of the subject in hand is woefully meagre and certainly not sufficient to justify my writing upon it. They must always bear in mind that whatever the result, my intentions at all counts are excellent. I am, moreover, giving our Editor absolute *carte blanche* to "strafe" it all or any part of it he thinks fit, so perhaps after all you will be spared, but if not, you must blame him and not me.

To begin with, I must admit that, thanks to an indifferent eyesight, I find considerable difficulty in identifying the different

species, especially when on the wing, and in a number of cases I have been quite unable to identify what were almost certainly very common species as will appear hereafter.

This country (Montgomeryshire) appears to be exceedingly rich in avifauna, and perhaps the best plan would be for me to give a list of species so far identified, together with such notes on each that I think may be of any interest. I will commence with birds of prey.

HAWKS.

KESTRELS are fairly common and I have seen as many as four in the air at the same time.

SPARROW HAWKS. Two seen for certain and very possibly more. On one occasion, for instance, a hawk that certainly looked like a kestrel, but whose behaviour was more like a sparrow-hawk or merlin, suddenly swooped down from some tall branches at some small bird, which it pursued along a hedge-row, closely following it in all its twistings and turnings and finally securing it.

MERLINS. I am almost positive I have seen two or three of these fascinating little hawks at different times, but have never been quite close enough to them to definitely identify them.

Besides the above I saw a very large hawk of some species I could not at the time identify,* it was the size of a curlew I should say and was soaring in wide circles around the summit of a high hill behind the house; I thought at the time it looked like a kite, but I don't suppose it could have been. This was at the beginning of March and I hoped it would turn up again, but so far it has not done so.

In connection with hawks it is extraordinary how soon birds of all species seem to get to know that one does not wish to harm them, and already the kestrels round here seem to realise the fact that I mean them no harm, and though they run wild at first I have latterly on several occasions passed within fifteen or twenty yards of one tranquilly sitting in a small tree or more often on the telegraph wires along the railway lines.

OWLS.

BROWN OWLS. These owls are very plentiful round here and I have on occasions heard five or six hooting from different

* (?) Buzzard.—ED.

directions round the house. On one occasion I surprised two sitting in a low ivy covered stump in the dingle behind the house. They allowed me to approach within a yard or less of them before suddenly taking to flight, and as they did so made a stoop at my head and at the same time voided a regular stream of excreta over me, most of which happily missed the mark by a fraction of an inch. This in my opinion was no mere chance happening but done with deliberation to cover their retreat, which it certainly would have done most effectively had I had any designs upon them.

BARN OWLS. Probably fairly numerous, though I have actually only seen two. One on the 20th February and again on the 1st March; this was very likely the same bird on both occasions as it appeared in exactly the same spot and at almost the same time on each date. This was the to me rather extraordinary hour of four p.m. It was then, of course, broad daylight, and the sun was shining brightly.* This fact however did not appear to concern the owl in the least degree, as it systematically quartered the ground, paying particular attention to the hedges and bushes, though to me it formed a very unusual and bizarre appearance.

On the second occasion a kestrel was in the air at the same time and within a few yards of the owl, forming an interesting contrast and accentuating the impression of the unusualness of the occurrence. The owl on this occasion passed within a few feet of where I was concealed behind the hedge and shortly after I saw it pounce on something, probably a mouse or a vole, in a field adjoining. Beyond these two species I have not seen nor heard any other species of owl in this district up to the present.

THE CROW TRIBE.

ROOKS are, as in most parts of the country, very numerous, and so much has been written upon them and their ways that interesting though they undoubtedly are they do not call for much comment here beyond the fact that for some weeks past now (22nd March) I have noticed them very busy repairing and spring cleaning their old homes, a pleasant reminder amidst this wretched weather that spring is at hand.

* During the winter, a pair of Barn owls was constantly about in the middle of the day close to my house.—ED.

CARRION CROWS are not uncommon, and I always think most easily identified at a distance by their raucous cries, more resembling the "bark" of a raven than the softer and much more mellow "caw" of a rook.

A rather curious and amusing incident occurs to me in connection with these birds that may be worth recording. It concerns a raven I possessed last year, which formed a great attachment to one of a pair of carrion crows which were in the habit of visiting a meadow at the back of the house. This field was always frequented largely by rooks as well as by the crows, and one of the favourite amusements of the raven—which, by the way, was allowed complete liberty—was to gradually sidle up closer and closer to the unsuspecting rooks until he got within a few yards of one, when with a sudden dash he would pounce upon it and inflict three or four vicious digs before the unfortunate rook was able to effect his escape. On the best of terms with himself after this performance he used to come hustling back to his lair giving vent to his feelings the while by a series of throaty gutturals. It was only, however, when he was safely esconsed on his favourite beam that he really let himself go; then began a veritable orgy of unholy glee, and as my wife used to remark, there was something almost uncanny in his sinister chucklings, interspersed with guttural grunts and deep croaks and followed by the whole repertoire of his accomplishments: barking, mewling, cooing like a pigeon, crowing, and repeating "Jolly Jack," the only words he could manage. The whole performance lasting as a rule about an hour or more. I fear, however, that I am rather straying from my "martins" the crows, so to return.

He was accustomed to approach the crows in precisely the same manner, but although he occasionally made vicious rushes at one of them, to the others, as will be seen, his conduct was entirely different. After he had made the usual cautious approach and was within a few yards of one of them (the lady crow I presume) he used to suddenly introduce himself with what I have no doubt he imagined was a graceful and courtly bow, at the same time half opening his wings and emitting a loud nerve-shaking croak, into which he strove, though with little success, to infuse some endearing expression.

The result however was neither encouraging nor flattering to his vanity, for on the first few occasions the crow, frightened half out of its wits, made off panic-stricken, much to the evident dismay and disgust of the raven, which however never attempted to pursue it, its feelings I suppose being too hurt or its dignity too ruffled to try another advance for the moment. After a bit, however, as the crow became more used to this performance, it merely ignored his advances until thoroughly exasperated by its indifference, the raven would suddenly in blind rage rush murderously upon the hitherto object of his affections, who however was usually too wary to be caught napping. Once or twice, whether it was because of some fancied encouragement from his lady-love or in order to try the effect of some new ruse I could not determine, he suddenly would hop off at a great pace towards his outhouse, but after proceeding about twenty yards he would pause to see if he was being followed I presume, and would continue his headlong dash for home, into which he would disappear for a moment or two, when his head would cautiously appear to see if his ruse had met with any success. More rarely still he would unearth one of his most treasured possessions and having carefully placed it in full view of the crow would retire to some distance with a great assumption of indifference, though beneath it all it was easy to see that his sable heart was tremulous with suppressed excitement. Eventually, none of his love-making schemes bringing him even a momentary gleam of success, his love turned to bitter hatred and the crows became to him as a red rag to a bull. They had barely time to alight when he launched himself blindly, furiously, after them, blindly because he displayed none of his usual running in the chase and pursued them frequently for a mile or more. This spleen and rancour that he developed against the crows was I feel sure the eventual cause of his downfall. One morning he was missing and did not turn up to breakfast, a meal he was seldom if ever late for, nor did I ever see or hear of him again. No doubt, whilst pursuing the objects of his hate, fate in the shape of "the man with the gun" overtook him and put an untimely end to his career; and as a fact we heard two shots fired near, early on the morning of his disappearance.

The bird was a great loss to me and while he lived, a source

of unfailing interest and amusement, tempered at times with annoyance one must admit, such as for instance on the occasion upon which I found all our most promising bulbs rooted up and neatly arranged in a line along the gravel path. Still in spite of all his faults, and they were not few, he was a real loss, and it would be an easy matter to fill a volume with his quaint ways and mischievous pranks.

MAGPIES literally swarm in these parts and go about in regular droves. Often in the evening, whilst waiting for pigeon, I have counted between sixty and seventy coming in to roost; they arrive almost exactly at sunset, mostly in parties of from five or six to a dozen or more, but the flight which usually lasts about ten to fifteen minutes is practically continuous, one lot hardly disappearing before the next looms in sight, forming, so far as I am concerned, an absolutely unique and most entrancing spectacle. It is rare to see any more birds after the flight is over, but now and then a belated bird turns up five or six minutes later and there is a considerable amount of excited chattering before the birds finally settle down for the night.

I suppose I ought to have taken toll of them to reduce their numbers a bit, which however much to the evident disgust and indignation of my man I could not find it in my heart to do, though I fear there is no doubt but that they will work sad havoc during the approaching nesting season. One, as though to give me a foretaste of what is to follow, has already been getting "busy" with my bantams eggs. As a rule they are amazingly bold, allowing one to approach within easy shot of them before taking flight and then only parachuting gracefully into a near-by tree. This also contrasting strongly with their behaviour when I have met them elsewhere in these islands, for speaking generally I have always found them wily birds, shy and indifferent of approach. With all their faults, and I fear their name is legion, they are most interesting and picturesque bandits and without question an ornament to any landscape.

Since writing the above, another proof of their unusual boldness in these parts has been afforded me, for a pair has just finished a nest in a fir tree adjoining some outhouses where men have been at work constantly for the last few weeks sawing up timber, etc.

I went up to investigate and found the nest complete with the exception of the lining of grass with which I understand they finish off their nest. The nest is visible from almost any window in the house and it will be interesting to be able to have them so closely under observation during their nesting operations.

JAYS. These birds do not appear to be numerous, though I once came on a flock of twenty or more, and I can always be sure of finding three or four in one favoured spot along the dingle. More recently also a pair have taken up their quarters in a small belt of trees near the house, where I hope they will settle down and set up house. Though exceedingly shy and wary at first they are now, thanks to being left entirely undisturbed, becoming quite tame and familiar, and even allow me sometimes to approach within a few yards of them.

The belt of trees they haunt contains a small stream in which I have formed a couple of ornamental pools, stocking them with gold and other ornamental fish. Some of these have of late mysteriously disappeared and my man blames the jays, upon whom I may remark he looks with no friendly eye. But though they certainly are to be seen taking a suspicious interest in the pools I personally acquit them of the theft and believe they only use the pools for bathing purposes, and I have at the same time a very shrewd suspicion that the real culprits are the self-same robbers of my hen-roost.

MONTHLY NOTES FOR JUNE.

By SECRETARIUS.

The season is undoubtedly late, which will be all the better for the backward ones, and much may be done to improve little points in the aviary that has escaped notice.

But before we think of anything else let us make sure that we have a good supply of *live* food. Live food is practically speaking the measure of success in a given season. In spite of all that has been written to the contrary nothing has been found to replace mealworms and every aviculturist should have a tub or two of these which are allowed to breed. You cannot expect the parents to rear

tiny young birds on "giants" any more than you could expect a human mother to rear a baby by giving it a bottle and expect the infant to swallow the bottle. It is a case of 3 into 2 won't go. If one has a tin of breeding mealworms to go at and young birds are hatched, the small worms about half-an-inch are sought for and given to the parents. With these it is my belief that any bird can be reared. But don't run away with the idea that you can breed your own mealworms. You will be speedily undeceived. You will have to depend upon the dealers for mealworms for the old birds. But they should be cut up for the smaller birds or either they will not eat them or if they do are likely to have fits. Also don't imagine because an aviary is large and contains a few flowers and plants that it will provide enough live food to rear the young. This is also a popular fallacy with many. Few of us have the courage to keep to one pair of birds in an aviary and even if one did they would soon clear the place of natural food. If you are still incredulous try it and tell us the result of the *post mortem*. Finally let us remember our old friend the popular mealworm and look to him principally to rear our bird families.

Another excellent and in many respects even better food is live ants' eggs (cocoons). If good and fresh there is nothing better and you can rear nearly any bird on them. But alas! they have two disadvantages. In the first place it is very difficult to get a constant supply of fresh eggs, and, secondly, the supply depends very largely indeed on the weather. No sun, no eggs is the rule. There is a third thing against them and that is they are very dear. But if you can ensure a regular supply of ants' eggs you may sleep in peace and leave the birds to rear their young without any misgivings.

The next commonest and of course cheapest article of food is the larva of the blue-bottle and popularly known as gentles. Careful observation has convinced me that in the vast majority of cases they are not suitable for either very young or very small birds. For adult birds and the larger species of young they may prove excellent. One aviculturist, at least, has suggested pricking the tough horrid skin before giving them to the birds. It need hardly be said that they *must* be well scoured. To sum up, they are not a bad substi-

tute for other forms of live food and they are very cheap, also very loathsome.

Later in the season wasp grub comes in. This is both cheap and admirable, but one cannot get it in June as a rule so we must leave that out for the present at least.

Finally we come to smooth caterpillars, green fly, and other entomological oddities. If you have many leisure hours (and the daylight saving bill will give you an extra one now) by all means pursue the wily "looper," the corpulent noctuid or the wriggling tineid. The birds will consume all you can get. Spiders, the exemplars of skill and patience, are also desirable guests in the aviary but with their greedy eyes, their restless palpalae and long hairy legs it is small wonder that people find it takes all their courage to stamp on these repulsive creatures. You cannot provide too many of them for your birds. Another insect very greatly appreciated is the crane fly or daddy-longlegs. I have caught thousands of these at night time resting on posts, the grass, fences, sheds, &c., but not generally till after mid-summer.

If you are trying to rear any of the thrush tribe, earthworms will be a cheap and efficacious form of diet. There are several ways of getting earthworms, not all of equal merit. The first is the scientific method, *i.e.* by driving a stick into the ground and twisting it round. At the same time, I imagine, you have to make a noise like a mole. The theory is that worms come leaping out of the soil or turf. In common with many scientific and expert theories it doesn't always work and the worms generally "lie low and say nuffink."

The next method is the labour method of catching them, *i.e.* by digging. This is tedious, laborious, and monotonous. Moreover the worms you thus get are generally a horrid livid hue, and, although eaten, not nearly so much relished as what, I think, fishermen call brandlings. Again, they are apt to be very large and birds much prefer small worms. Still it is a means of collecting worms and quite a good one. Also one tills the soil at the same time.

The third method is the sporting method. All one needs in this method is a bright light and fingers as quick as eyes. Worms

come out to feast when mortals think of bed, and if one goes exploring about 11 p.m., especially on the lawn or along the north borders of the garden one will find thousands of worms of all sorts and sizes. Now worms for all their worminess are crafty creatures and the slightest jar on the ground or the snapping of a twig under foot will alarm the lowly worm. It seems as if they have perception of light for I have noticed that if one stands perfectly motionless and suddenly turns the light on there is a glint, a flash, and a disappearance of something! That something was an earthworm. However, after a few moments you can get to work and having very carefully defined which is the head end you snap the worm as far from the head as possible and with the same movement withdraw *Lumbricus terrestris* before he has had time to dig himself in. In this way during showery weather I have captured up to 250 in an hour. One should only take the smaller and middle-sized worms. The big ones are, as often as not, wasted. Worm-hunting really provides excellent sport to those who cannot afford a salmon stream or a deer-forest. But the number of birds that require worms is rather limited, which is a pity since this form of diet costs nothing.

It was intended to deal with nesting sites, but consideration seemed to show that food was the more important and the "monthly notes" were never intended to supersede other and more important matter, so that one cannot deal with both this month.

When the young do hatch out one must be ready on the instant with live food and supplies given at least every two hours, as, after feeding the young, the old birds clear the dish. And it is for this reason if for no other that it is an advantage to have as few pairs as possible in one aviary. For all mealworm eaters (and how many are *not* ?) will expect and see they get their share. It is not altogether satisfactory to give the parents, however tame, one at a time unless one can give up 18 out of the 24 hours to one's birds. Experience has shown that the result of this is generally only to rear one out of a brood. To throw mealworms down, broadcast, is extravagant and results in the old birds trying to force "giants" down infant throats. A good plan is to put a dozen or fifteen of the proper sized worms in a glass dish, out of which the worms cannot crawl but out of which the birds can easily land their fish. The

number and frequency of the supply must be entirely governed by circumstances. Newly-hatched chicks will not eat more than five or six in a day. A chick ten days old will eat twenty or thirty at least and thrive on them. If then you should have the good fortune to get some softbills (or even some hardbills) to nest and hatch out there should be every prospect of rearing the young if one is methodical, thoughtful, and thorough. The method advocated has been thoroughly tried and proved successful, but the writer would be the first to acknowledge the truth of *Quot homines, tot sententiae*.

P.S.—Owing to short notice there was no time to correct the proofs of last month's "notes" consequently one or two rather amusing if somewhat unintelligible misprints crept in. On page 208 the sentence "Only 100 1 + 1 for the breeding aviary please," suggests an algebraical formula. If we substitute "100 A 1" some of our readers will recognise the hall mark of a first-class ship as used by Lloyds. "Grit is food for them" should read "grit is good for them." Then "Trek" should read "Rape."

CORRESPONDENCE, NOTES, ETC

LETTER DAMAGED IN POST BOX.

Mr. C. BARNBY-SMITH received a letter in a long envelope on the 10th of May, a large portion of which was torn and pecked. On the envelope was written by the postal authorities "Damaged by bird building in letter-box" as well as a printed label "Found open (or torn)" affixed to a part of the rent. Probably a great tit.

I believe that in error I called Lt.-Col. Tweedie's mouse the "Spanish dormouse," it should be called the "Garden dormouse" (*Elomys quercinus*).

PHILIP GOSSE.

[Is not this animal also called the Oak Dormouse? — ED.] cf. p. 134.

SUPPOSED TROUPIAL.

I notice that Dr. E. Hopkinson suggests that Mr. Shore-Baily's supposed troupial may be the bobolink (see p. 209). I have kept the bobolink, and of all the *Icteridæ* that is about the last I should have selected to represent Mr. Shore-Baily's species: its bill is not long and bears not the least resemblance to that of the military troupial; in fact it is bunting-like in outline. The bobolink is not

"glossy blue-black," it has the nape pale-buff, the scapularies and lower back ashy white, the wing-coverts are not white, the middle tail-feathers are not white; the feet are not black, but flesh-pink, and the beak is horn-colour, darker towards tip of upper mandible, not grey. The hen is not entirely bright bay, but is not unlike the male in winter plumage, but slightly smaller. I must therefore adhere to my original opinion until some bird a little nearer to Mr. Shore-Baily's description is indicated.

A. G. BUTLER.

"A SPRING MIGRANT" (MAY NUMBER p. 210).

To the Editor of the *Avicultural Magazine*.

SIR,—Will you kindly allow me space to set right some printer's errors in these verses, which destroy the intended meaning of their respective lines?

Stanza 5. Last line. There should be no stop—or at most a comma—after "flies."

Stanza 6. 2nd line. For "The fabled eagle" read "Thy fabled eagle" (because the fable relates to the *bird*-family, is a bird-tradition, and naturally the willow-wren would know it.)

Ibid. Last line. For "depths" read "depths." (The idea being this: that since the depths are—by poetic licence—seen from the zenith, they will be infinite; as, indeed, in sober fact, they almost are when seen from the lately recorded aeroplane height of 29,000 feet the height of Mt. Everest!

I must also plead guilty to one mistake in my own MS., viz:

Stanza 3. Last line. For the full stop after "sleep" put a semi-colon.

I am, your obedient servant,

THE WRITER OF THE LINES.

[We greatly regret these errors. The writer failed to receive a proof of the poem.—ED.]

"HEARING OF PHEASANTS AND OTHER BIRDS."

SIR,—I have read Mr. C. Barnby Smith's letter (*ante* pp. 200-201) on the "Hearing of Pheasants and other birds" with much interest, because, from the facts he brings forward it would appear that the reason of wild pheasants "crowing" on hearing distant gun-fire is directly due to their latent fear of being shot. Up to the time of reading Mr. Smith's letter I had held the view that pheasants "crowed" because the concussion of heavy firing in some way worked on their nervous systems, and that these "nerves" applied to all the pheasant family. Mr. Smith's observations tend to prove that this is not so, as he states that his captive pheasants belonging to several different species took absolutely no notice of the noises heard.

Where I live we are surrounded by lime-stone quarries and blasting goes on every day; these blasts are what are known locally as "small pops," that is to say, small charges of powder put into large lumps of rock which have been blown away from the rock face and which require breaking up into small handy pieces. These explosions make a very "sharp" noise and often six to ten go off in very rapid succession, yet the wild pheasants and also the ducks on my big

lake never take any notice whatsoever of the noises and seem able to differentiate between the blasts and the firing of a shot gun. On the other hand, every month or so we get what is known here as a "big shot," which is a heavy charge of dynamite, and which when exploded blows away a large portion of the rock face, making a deep tearing noise and shaking the ground for miles around; such explosions make the pheasants "crow," the ducks on the lake jump into the air and if you happen to be peacefully writing ornithological notes you probably jump yards high out of your chair and make a few blots on your paper! Heavy gun-fire, especially from the sea, appears to make the same subterranean concussion and to cause the pheasants to "crow" in the same way; moreover the birds seem more sensitive to these concussions than we humans are!

Is it feasible to suppose that these nervous "crowings" of the wild pheasants are due, not so much to hearing a sound which reminds them of shooting days, but rather to a highly-strung nervous system being suddenly "shocked" by an unwonted sound? I think we are all more or less agreed that "song" in birds is the outcome of a highly-strung and excited nervous system and is simply a safety-valve whereby nature lets off superfluous energy, and I think I am right in saying that when a bird's nervous system suddenly receives a shock the bird at once breaks out into song, hence the "crowing" of wild pheasants under gun-fire.

It is possible that the reason for Mr. Barnby Smith's captive pheasants taking no notice of the firing and bomb explosions may be put down to the fact that these birds were living under artificial conditions which would tend to lower their vitality and numb their nerves. * My own experience is that pheasants are not alone in expressing nervous shock from gun-fire, as I have noticed that blackbirds "scold" when the pheasants "crow" and my tame white-fronted geese also give voice, but I have noted no uneasiness amongst my large stock of high-class pedigree game bantams and pigeons.

Yours, etc.,

Challen Hall, Silverdale,
near Carnforth, Lancs.

FRED. SMALLEY, F.Z.S., M.B.O.U.

THE OWL PARROT.

SIR,—In his very interesting article on *Stringops* in the last number of the "Avicultural Magazine" Dr. Graham Renshaw says that "the longest duration of life recorded in captivity is two years." It may be worth while therefore to record the fact that the last specimen owned by the Zoological Society of London was received on June 10th, 1911, and died on October 3rd, 1915. I understand that, prior to its arrival in London, it had lived some time in captivity in New Zealand.

D. SETH-SMITH.

* Might it not be attributed to the birds having gained more confidence with knowledge of protection?—ED.



CANVASBACKS.—A GROUP OF CANVASBACK DUCKS WINTERING ON CAYUGA LAKE.

(From a painting by Mr. Louis Agassiz Fuertes.)

Adlard & West Newman.

AVICULTURAL MAGAZINE,

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JULY, 1916.

LOUIS AGASSIZ FUERTES—PAINTER OF BIRD PORTRAITS.*

By FRANK M. CHAPMAN.

Love of birds as “the most eloquent expression of nature’s beauty, joy, and freedom” is the rightful heritage of everyone who in one way or another hears the call of the outdoor world. But that inexplicable fascination for birds which awakens an instinctive, uncontrollable response to the sight of their forms or the sound of their voices, which arouses a passionate desire to become familiar with them in their haunts and obtain an intimate insight into their ways, and which overcomes every obstacle until, at least in a measure, this desire is gratified, is the gift of the gods which marks the true ornithologist. In him the universal, if not always developed, love of birds is supplemented by the naturalist’s longing to discover the secrets of nature. Your true bird student, therefore, is a curious, and sometimes contradictory, combination of poet and scientist.

Men in whom this taste and ambition combine to make birds the most significant forms of the animal world, are not numerous; but a great painter of birds must be primarily a man of this type. When therefore one considers how small is the chance that the essential attributes which make on the one hand an ornithologist, on the other an artist, will be found in one individual, it is small wonder that the world has known so few real bird-portrait painters.

* Mr. Chapman most kindly gave permission for this article to be published, which appeared in ‘Bird-Lore,’ at the same time sending photographs of Mr. Fuertes’ beautiful pictures.—ED.

Artists who introduce into their canvases birds as impossibly feathered as conventional angels, artists who paint birds with more or less accuracy of color and form and, more rarely, pose, have not been few in number; but the artists who paint bird portraits based on an intimate, sympathetic, loving study of their subject in nature, and who have the ability to express what they see and feel, can be counted on one's fingers, and the name of Louis Agassiz Fourtes would be included before the second hand was reached.

Fuertes, in possession of a freshly captured specimen of some bird which was before unknown to him, is, for the time, wholly beyond the reach of all sensations other than those occasioned by the specimen before him. His concentration annihilates his surroundings. Color, pattern, form, contour, minute details of structure, all are absorbed and assimilated so completely that they become part of himself, and they can be reproduced at any future time with amazing accuracy. Less consciously, but no less thoroughly and effectively, does he store impressions of the bird's appearance in life, its pose, mannerisms, characteristic gestures of wings, tail or crest, its facial expression—all are recorded with surprising fidelity.

This indeed is the keynote of Fuertes' genius—for genius it is. His mind appears to be a delicately sensitized plate designed especially to catch and fix images of bird life; and of such images he has filed, and has at his finger tips for use, a countless number; for his opportunities for field study have been greater than those of any other painter of birds. It has been my good fortune to be with Fuertes on many occasions when for the first time we met with some particularly interesting bird in nature. At such times there was perhaps no very marked difference in the extent of our enthusiasm or the manner in which it was expressed: but all the time, subconsciously, Fuertes' mental photographic processes were making record after record. At the moment not a line would be drawn or a note written, but so indelibly and distinctly was what he had seen etched on his memory that it could later be visualised as clearly and faithfully as though the original were before him.

Fuertes' bird portraits, like those of a great portrait painter of men, depict not only those externals which can be seen by any observant person, but they reveal character. His pictures are in-

stinct with life, and differ from the work of the inexperienced or unsympathetic artist as a living bird differs from a stuffed one.

Fuertes was born at Ithaca, where he now lives, in 1874. In 1897 he was graduated from Cornell, of which his father was director of the College of Civil Engineering. Drawing birds was with him as natural an outward evidence of an inward condition as with most children spinning tops is an expression of an inherent love of play. Before his graduation, he had made the illustrations for Florence Merriam Bailey's *Birding on a Bronco*, and Mabel Osgood Wright's and Elliot Coues' *Citizen Bird*.

It was the encouragement he received from Coues that led him definitely to decide to become a painter of birds, and the immediate recognition his work received permitted him to give rein to the naturalists' longing to see the birds of other lands.

In 1898 therefore he went, with Abbott H. Thayer, under whom he was studying, Gerald Thayer and Charles R. Knight, to Florida. The following year, as a member of the Harraman Expedition to Bering Sea, he had exceptional opportunities to meet in life many boreal birds which had been studied by few, if any, bird artists. The reports of this expedition contain some of the studies made on this trip. In 1901 he accompanied a party of the Biological Survey into western Texas. In 1903 he studied in California and Nevada: in 1904 in Jamaica: and in 1909 in the Gulf of St. Lawrence.

In 1902, 1907, 1908-11 and 1913, Fuertes acted as artist to the American Museum's expeditions, which during these years made field studies and gathered material for habitat groups in the Museum from the Bahamas, Florida, Saskatchewan and Alberta, Yucatan, Mexico and Colombia.

On these expeditions he has collected about thirty-five hundred specimens, which are beautifully prepared and fully labelled with data of special value to the artist, when necessary. These data are in the shape of color sketches of bill, feet, eyes, or other unfeathered areas, the colors of which disappear after death. Such studies can be obtained only from the living or freshly captured bird, and Fuertes' collection of them is unique.

As the artist of American Museum expeditions, Fuertes has

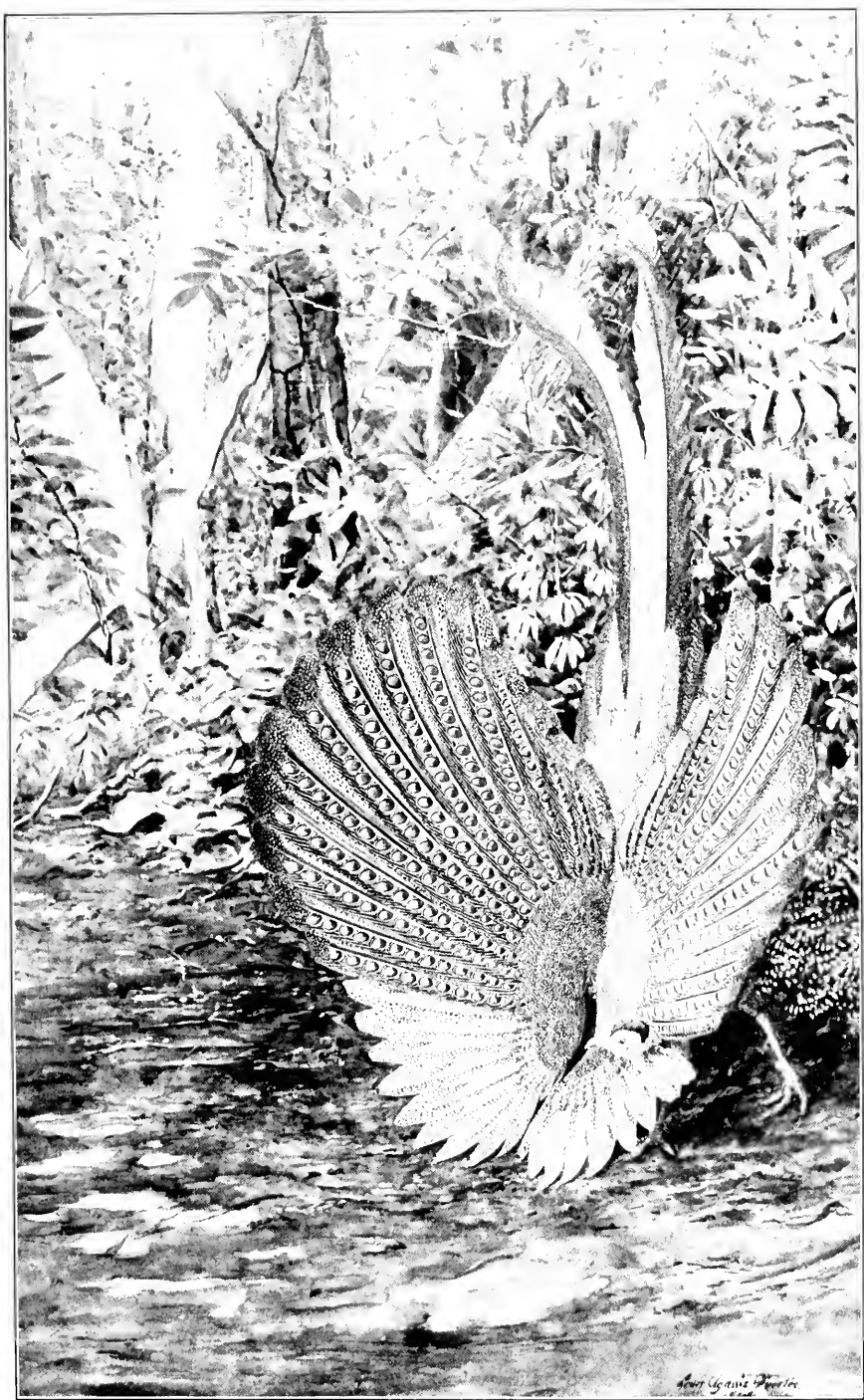
not only made sketches of the birds secured, but oil studies of the landscape selected as the panoramic background for the habitat group in which the birds were later to appear. In each instance these are accompanied by detailed color sketches of leaves and blossoms for the guidance of the preparator of the vegetation modeled for the group. Where birds appear in the background of the completed group, they are painted by Fuertes himself; and the landscapist who realizes his limitations gladly avails himself of this expert coöperation. Thus we have in these groups (notably the Flamingo group) paintings by this artist which to bird-lovers of later generations will have all the interest a panoramic painting by Audubon of, for example, a flight of wild pigeons would have for us today.

Because of the accuracy of his work, Fuertes is ever in demand as the illustrator of technical and popular books and articles on ornithology. His contributions to publications of this nature amount to thousands of drawings; many of them have been adequately produced in color and, through their wide circulation, they have exercised an educational influence of the highest importance. Such for example are the illustrations in Eaton's great work on the *Birds of New York*, published by the State, those in the *National Geographic Magazine*, and the series appearing in *Bird-Lore*.

In all of these illustrations everything is made subservient to the bird itself, which usually claims as large a share of the picture as it does of Fuertes' attention. But in a series of twenty-four large panels in oils, done for the library of Mr. Frederick F. Brewster of New Haven, the birds, chiefly water-fowl and shore birds, take their proper place in a series of strongly handled landscapes which reveal Fuertes' art in a new aspect. With no sacrifice of his skill and insight as a painter of bird portraits, he has here placed his subjects in a setting which adds immeasurably to their beauty and to the appeal they make to the imagination. These pictures, in the writer's opinion, are Fuertes' greatest achievement and point the way for the development of his exceptional gifts.

* * * *

It was nearly eight years ago that I had the pleasure of meeting Mr. Louis Agassiz Fuertes, when staying in a country



MALE ARGUS PHEASANT, DISPLAYING.
(From a painting by Mr. Louis Agassiz: *Puerbes*.)

house near Albany, N.Y. Indeed our kind hostess purposely asked him to come, in order that I might make his acquaintance and see some of his paintings. Of these my wife and I purchased four. All of waterfowl. Mr. Fuertes, seeing my paint-box, offered to paint me a male summer duck, which he did from memory in a very short time, and it hangs with other treasures in my bedroom. He impressed me as very diffident as to his abilities, and very kindly; and I remember the clever manner in which he imitated birds' voices. American men of his calibre are well worth meeting, neither can I ever forget the courtesy and kindness shown to me, and not only by those who were lovers of birds. HUBERT D. ASTLEY.

ABOUT BIRDS ALONG THE RIVER NEAR OUDTSHOORN.

By F. E. BLAAUW.

Oudtshoorn is situated on a small affluent of the Olifant's river in the south of Cape Colony. It is chiefly built on the eastern side of it, and the ground on that side rises considerably, forming steep banks in many places.

On the western side the banks are mostly flat and are overgrown with *Arundo donax* and some mimosa trees (*Acacia horrida*). On the eastern side there is also some *Arundo donax*, but the higher parts are planted with trees by the inhabitants who have gardens there, and the eucalyptus trees are rather numerous.

One morning—end of April, 1914—I decided to follow the course of the river for a while to see what birds could be observed. Although the river bed is rather wide, it did not contain much water and only in a few places were there pools of any depth, which however were full of small fish. In the shallow parts a good many rocks and stones projected out of the water.

The first birds which I saw as I approached the river were a good many Cape wagtails (*Motacilla capensis*) who were catching insects in and about the shallow water. The Cape wagtail is quite a feature of South Africa. It moves daintily on the walks of the parks in Cape Town. I met with it in the inland towns and small

settlements; I met with it round the isolated farm building. I found it along all the rivers and valleys and I found it looking for flies in the kitchen of the Standard Hotel in Bredasdorp, and everywhere it is most surprisingly tame and confiding.

But I must return to my river and try to "acquire merit" by telling about the birds. Slowly walking along the banks I was surrounded by a swarm of brown martins who were busy catching insects. A little farther on I was attracted by the plaintive calls of a family of white-eyes (*Zosterops capensis*) which were examining the lower bushes. These birds, although bigger, remind one of the goldcrests of Europe in their little ways.

On the high banks opposite there was a dead tree, and on the branches of that tree there were five birds having a great but bloodless battle. The end was that three were driven right away, when the two remaining birds gave a very extraordinary performance. They both began to open and close their wings as if the wings had been fans pulled by strings. They were specimens of a largish kingfisher (*Halcyon albiventris*) which I had met before in the small woods on the Veld between Port Elizabeth and Van Stadenskloof, and which does not seem to have to frequent the water as other species do. These birds are brown with blue wings and red bill and are about the size of a small thrush. Probably attracted by the noise of the fight, two splendid hoopoes (*Upupa africana*) now made their appearance, perching on the same dead tree, to be in turn followed by a number of green weaver birds, so that there was quite a gathering of birds.

On the bushes near me I had an occasional glimpse of a flock of waxbills, or roodbekjes as they are called by the Boers. (*Estrellda astrild*): these little birds are always seen in small parties and one hears them very often, but it is rather difficult to observe them for any length of time as they always hide themselves in the thick undergrowth.

Walking on, I came to a place where the water was again very shallow, and here two charming little plovers (*Charadrius tricoloris*) were running in the water and over the stones in search of insects. The birds were quite fearless and took no notice of me. This little plover is rather common along the S. African rivers and I

met it very often. It is grey and black and has a white breast and a white ring round the back of the head, with red on the face.

On the western side of the river, where there were some open fields, a few starlings (*Spreo bicolor*) were running. The name *Spreo* I suppose is a corruption of the Dutch name *Spreeuw*, which means starling. These birds are of a glossy greyish black colour all over, with white bellies and white eyes. They are tall birds, bigger than our starlings, with long legs, tails, and necks. They resemble our starlings in their mode of life and are fond of running in the fields where cattle are, but they are also very fond of fruit. Like our starlings they congregate in large flocks towards the evening, making beautiful flight evolutions over a lake, marsh, or river, before going to sleep in the reeds; assembling with much clamour. One evening I had the good fortune to witness such a gathering near Oudtshoorn.

Besides the starlings, which made their evolutions in big clouds above the reeds, there was quite a gathering of the beautiful *Elanus caeruleus*, which however seemed not to be following the *Spreo*'s, for after a while they went away in small companies over the Veld with great speed and very near the ground, probably hunting the small rodents that were coming out of their burrows at dusk. In this same place I also saw a number of big-eared owls sitting on the ground near the ridges, from which they expected small mammals to emerge. I was told that *Spreo bicolor* makes its nest in the holes of the high river banks.

But I have again wandered away from my river and must return to it. Proceeding on my way along the water's edge I noticed the remains of some wire fencing hanging over the steep bank, and on one of the wires there was a beautiful white and black bird busily catching insects, very much in the same way as do our fly-catchers. It was a male of *Tarsiger silens*. Soon after, three white and black crested birds came passing me, screaming loudly, and when they reached one of the deep pools that abounded with small fish they hovered in the air, looking intently downwards, the beautiful white and black markings in the tail showing to great advantage. After a few seconds they plunged one after the other into the water, going quite under, to emerge with some small fish or big insect which they had caught. They were specimens of *Ceryle rudis*, the

black and white kingfisher, which I believe is found over nearly the whole of Africa.

Walking on slowly, I now came upon a piece of a dead branch that was hanging over the water, and on it was quite a small kingfisher in a gorgeous blue dress and with a red bill (*Corythornis cyanostigma*). The blue of this little bird's feathers was so brilliant that our own kingfisher, I am sure, would look faded next to it. A hundred yards farther I met a fourth species of kingfisher (*Alcedo semitorquata*) which has a dark bill and is darker in colour and larger than the other one.

In the bushes along the river there were a lot of weaver birds' nests hanging on the tips of the branches, looking like small domed baskets. The owners were near and amused themselves with uttering hissing sounds whilst busy at their works of art.

The river now ran into flat country on both sides and in the shallows I saw a hamerkop (*Scopus umbretta*) walking slowly about and looking very grave, as these little brown-crested storks are apt to do. The hamerkop is often seen along the water-courses of South Africa and it is a quiet confiding bird. In most parts of Africa it is said to build its big nest of sticks in trees, but in the parts which I visited I found the nests in crevices in the rocks. Perhaps there were no suitable trees in the neighbourhood of Oudtshoorn, near Bredasdorp, etc.

Not far from where I saw the hamerkop there were several examples of the black-necked heron (*Ardea melanocephala*) standing in the shallow water.

On one of the banks, where a waggon track crossed the river, there were some pepper-trees which had been planted along the road. These trees bear long clusters of red berries, which contain each of them a very strongly flavoured kernel, which the mouse-birds are very fond of, and as I was looking at the trees, which are very ornamental, a small family party of these curious birds flew into them. These birds can be distinguished at once; firstly, by their long tails, and, secondly, by their way of alighting in a tree. When they approach a tree they stop beating their wings, gliding on to the branches with their wings extended like miniature aeroplanes. In the tree they sit on the branches in such a way that the tarsi are

lower than the toes, looking as if their legs were dislocated or powerless to keep the body in its proper position. To eat the berries of the pepper-tree they hang themselves by their toes on the end of the hanging clusters, their heads being placed between their toes, like an acrobat who hangs by his hands on a trapeze. The birds I observed at this spot belonged to the species *Colius striatus*, which is grey all over. It was a pair of old birds with a brood of young ones. The old birds could be distinguished by their longer tails and the glossy white spots on the sides of the bill.

As I left the river to return through the fields I came across a specimen of *Lanius gutturalis* which had been drinking and was having a fight with two yellow-vented bulbuls (*Pycnonotus capensis*). This bush shrike is a very beautiful bird; it is mostly green with yellow underside. In the tail there are fine black and yellow markings and the throat is of a very vivid yellow inscribed by a black line. In some places it is called by the Cape Dutch *Klaas Pierewiet* and in others *Bakbakiri*. It is one of the most interesting birds I know, and it certainly is a very intelligent one. As a rule one finds it in the open Veld, where occasional small bushes form shelters.

Country like this is found to the north of Oudtshoorn in the so-called "Small Karroo." If one walks there one's attention is often attracted by curious noises, which are sometimes very soft and melodious, and at others harsh, like a creaking waggon. If one walks to the spot where the noises come from one can often find nothing to account for them, but if one has luck one just catches a glimpse of a yellow and green bird which disappears between the bushes. This is our shrike, *Klaas Pierewiet*, who was making fun of the passer-by. Sometimes one sees him sitting on the top of a hay-rick where he is quietly observing you; all the time amusing himself with his weird noises, but generally you only hear the notes without seeing the bird. Sometimes they answer each other, and then the place is full of unaccountable music and strange sounds.

This bird in its ways forcibly reminded me of another which I had met in the virgin forests of Southern Chile (*Pteroptochus rubecula*) which also cannot resist a conversation with a traveller, and during a trip to that country in 1911 it took me a long time before I knew who was the author of a strange wild laugh which

resounded occasionally as I rode on my way through the dense forest. One day at last, the laugher, more curious than the other members of his family, stopped on his branch to see me pass in close proximity, thus giving away his secret. I then saw a big brown bird with a red breast like our robin and with glistering intelligent black eyes, and our acquaintance was made.

On my way back from the river I walked through the principal streets of Oudtshoorn. The gardens near the houses there were planted with a number of wild fig trees, which were full of fruit. Feeding on the small figs were great numbers of greyish starlings with black wings. They were wattled starlings (*Dilophus carunculatus*) and the flock consisted of old birds with their broods. Some of the young birds were still being fed by the parents.

After a good long look at the starlings I went to my hotel and had a very bad dinner in a very chilly room. And if some members of the "Avicultural Magazine" should be curious to know how I can remember that the dinner was bad on that special day, I can only answer that my experience of South African dinners is that they are *always* bad, so that I cannot easily make a mistake. As to the chilly room I can vouch that it was so, although in Africa!

BIRDS IN MACEDONIA

By CAPTAIN BERNARD E. POTTER.

In this sunny land, where a sample of the best English June weather replaces the cold and snow we have read of in the home letters, birds, animal and vegetable life is full of wonder for the naturalist.

In bird life one is delighted to find a chance of studying the birds of prey, and one regrets exceedingly one's ignorance of them, because observation at home of many of these same species is denied owing to the terrible destruction by gamekeepers and pot-hunters. Therefore I feel there is some excuse if these cannot be named in many instances.

In the villages close by, of Aivatli and Baldza, tame kestrels make themselves at home and dispute possession with the ubiquitous

jackdaws which appear to replace the British sparrows. One day, while riding through Aivatli, I stopped to watch with my pair of field-glasses a pair of kestrels. They allowed me to come very close. They entered a hole in the wall just under a gable end. The difference between the two sexes is very striking. The blue and reddy-brown of the male and buff breast with minute spots; these colours are absent in the female, whose plumage is for most part streaked with black on light ground. On the Akbuna Pass I watched a male hover at fifteen paces away swoop and catch a field mouse, its beautiful colours were again apparent. At Baldza, too, these birds are at home in the village.

One day, at our Lembet camp, five miles N. of Salonika, I was fortunate to be able to watch a sparrow-hawk, just above our transport lines, dive into a flock of starlings, which, scenting danger, attracted my attention by the way in which they opened out and closed in upon themselves. One victim was caught in the air and carried off.

A beautiful hawk or kite is generally to be seen flying over the great Langaza plain. Briefly, its colours are very bright grey with black wing primaries. It hunts over the ground flying very low as if about to alight each moment. A name suggested to me is Swallow-tailed kite. Another huge hawk I see on the plain, often perched upon a post. This is a dark-coloured bird with bluey colours, possibly a peregrine, as it is much larger than the sparrow-hawk.

Eagles are plentiful; as many as three different kinds have been observed at the same moment soaring and circling in the air. One appears to have drab markings on the head and back, on brown ground. It is not so large as another which is of black and brown colour. I was delighted to stalk one great eagle, which sat on a naked bough of an elm tree close to Tumber on border of lake Lougaza. I dismounted and walked by my horse on side away from the bird, getting within thirty yards. The dark brown hue was all that could be made out, except a light colour about the eye and light markings of the back when it flapped off. Another eagle is one I have admired at the Zoological Gardens, with a white head and rufous neck. In all of them, when on the wing, the finger-like projecting wing feathers are very distinct.

Owls are numerous. One is a very large owl, has a conspicuous white rump; another is very small, is brown with white dots on the wing. Both can be seen flying in the day-time. Their cries by night I never tire of hearing.

One afternoon, near Palchora—a very small village at the eastern extremity of the long lizard-like hill on the west of the Langaza plain, the Deve Kran (camel pack) of the Turks—I saw a great grey shrike perched on topwood branch of a shrub. Here, too, bushes and vegetation are much more luxuriant than about the semi-circle of hills around Salonika. Here I saw young stonechats, chaffinches, goldfinch, common linnets, and one specimen of a bunting new to me. It had a black and saffron yellow head and patch of crimson at sides of breast, altogether a beautiful bird. It is not surprising that greenfinches should be absent from these parts which have comparatively few trees, for greenfinches always seem to hide beneath foliage, making their whereabouts known by their well-known twitter.

Goldfinches are a bird-feature of this country. Great flocks wheel in the air as one passes, and as they alight the wondrous gold markings are intensified. It is gratifying to see so many here when in England they would appear to be getting scarce. The common linnet, which always seems uncommon at home, is one of the chief singers; its note reminds one of the song—"little bit of bread and no cheese"—of the yellow-hammer. The latter I have not yet seen here.

On March 20th I saw a wheatear; on 21st two, and on 22nd at least four in full plumage. They are very tame. Another bird appeared about the same time, looking like a very heavily marked wheatear, with more black feathers and rest of the plumage snowy white, the hen bird is a sandy colour.

In December and January I used to see in the gullies at Lembet a steel grey bird with reddish markings about the tail, especially noticed in flight, which appeared to be a kind of redstart. But the common English redstart I have never seen here.

On April 4th I noticed swallows for the first time when on a visit to Salonika, they were flying about the "White Tower." There are now many to be seen in the village of Aivatli near by and some

in the nullahs, where we may possibly find their nests later on. One might have expected the kestrels would have scared them away from the villages.

Now I would like to say a word about the tortoises which roam about these hills, being especially frequent about the steep banks of the gullies and nullahs. The largest measured nine inches in straight line from head to tail end of shell, but measured along the curve, it is three inches longer. The males seem slightly larger when full grown and heavier and more massive. Their colour is mostly black with yellow edgings to shell plates; the females are yellow with black edgings. When feeding undisturbed on vegetation, frequently choosing dandelions, the long lissom neck moves more freely with gliding movement. They make holes in the earth, generally under ground holly, and here they were mostly hibernating when we arrived in December. Spring begins early here and this is their period of great activity; during their courting I have heard them emit sounds like a bark, usually they can only hiss, but one I picked up uttered this sound. One staff officer had told me about this, but his mess were amused and sceptical.

Tortoises are wary animals, and with reason, for they have many enemies large and small. Eagles are said to lift them up and drop them to break open the shells; lizards are said to dart at them and catch them in the soft part of the neck or limb. But coming to facts, I have observed that the larger ones, especially the males, are infested by large flat bugs with reddish edges to body. These fasten on to the neck, on proximate parts of limbs and at union of skin with shell. They bury their heads in the flesh and are dislodged with great difficulty. I have noted a number of tortoises with broken backs, sometimes due to tread of horse or timber wheels. But in most cases there is a dent in the hinder part of the back of shell. One day I saw near a tumulus off the Monaster road a raven pecking away and, on riding up to the spot, saw the bird eating the interior of a tortoise through a hole in this same situation. I am inclined to think that ravens with their powerful bills drive in the shell plate to batten on their victims. Ravens are very common and find food in plenty from the carcases of beasts done to death,

which are then skinned by the Greeks, who are noted for overloading their animals and finally sitting on the top of the pack.

Rooks and jackdaws in huge flocks used to find food in plenty about the camps at Lembet, and were thoroughly at home and very tame; among them were a few carrion and hooded crows. Each night the rooks in long straggling line used to fly homeward to the north-east, and reminded me of the proverbial short cut "as the crow flies." Latterly we have seen none. There are few trees here and probably nesting in the trees up country takes up all their attention. The jackdaws, too, are now found and have settled down to village life, where the spacious and well-overhung eaves give shelter for their nests. In the male there is a conspicuous white edge to the lower part of the grey nape.

Langaza lake is a great resort for wildfowl. On my last visit I rode right up to the water's edge to satisfy my curiosity, as I remember once doing when near Lake Superior, Canada. I found the water, in each case, fresh not salt. The ripple of the waves reminded me of Lake Superior, but Langaza lake was above its usual water mark owing to heavy rains, and the waves broke over the green turf. The only birds I saw were coots and black-headed gulls, both very plenteous. But geese, swans, mallard, teal, and widgeon, also cormorants and ruddy sheldrake, I have seen shot in some of the regimental messes. The gunners have usually utilized a boat for their sports. When encamped at Lembet, now about two months ago, it used to be a never-ending pleasure to observe night and morning the great V-shaped flight of geese and sometimes swans. The long line, often containing 100 birds, were marvels of mathematical accuracy.

Between Langaza itself and the lake is an ancient Roman bath built over hot springs. The domed roof, perfect octagon of sides, and the dim light due to the steam are things to remember. Near these baths are great nests of the storks. The shocks lie upon elm trees and chimneys of deserted houses. No storks were there when I visited this spot, but I am told they are very numerous now. But, as early as March 3rd, on nearing the village of Güvesne, near a mound, I watched a stork on the banks on Güvesne Dere (stream). Its colour, as it stood upright, was white with black wings and tail,

and black stripes about breast. It flew away, retracting its long neck while the long legs trailed beyond the tail.*

As all know at home, things have been quiet for the Allied Forces in Macedonia, so I have taken advantage of this to form a small Society for the study of Natural History, and visitors come to us from other units. We have held seven very successful meetings, as, among so many, specialists in different branches turn up in surprising fashion. Last meeting we discussed snakes, of which I can identify seven varieties—the only poisonous one I have seen is viper *asicornus*, with wart-like tip to the nose, up to two feet in length,—and also various insects, reptiles, etc. But reliable information about birds is, I regret to say, very difficult to obtain.

Not the least deterrent to the solitary explorer in this little visited and almost barbaric land is the formidable Macedonian dog. Roaming flocks of sheep and goats are watched by the gaily dressed goatherd or shepherd, with his scarlet cummer-band. He is assisted by these massive wolf-like animals who keep to the outskirts of the flock. They are a terror to rider and horse as they come bounding along with no doubt of their intent. Escape is best attained by calling to the shepherd and using such words as one has picked up: skili (dogs), parakals (if you please), efcharisto (thank you), kalimera (good day or evening). Recourse to stones or revolvers is not recommended.

REMINISCENCES OF A FIELD COLLECTOR.

By A. J. CAMPBELL, C.M.B.O.U., MELBOURNE (VIC.)

[From "*The Ennu.*"]

[These notes were read at a meeting of ornithologists, held in Melbourne, on the occasion when Mr. Campbell presented his collection of Australian birds' eggs to the National Museum, Victoria.]

Once, when I was going afield, I met an enthusiastic friend, who was preceding to a land sale. Patting me on the shoulder, he

* A heron. Storks extend their necks when in flight. Perhaps some member would name many of the birds mentioned.—ED.

said—"Sell your bird-eggs old man, and put the money into land." The big boom broke. He lost his land; my egg collection is still intact. That is history. It is difficult to state what is the intrinsic or scientific value of a natural history collection. To accomplish any great object in life, there must be a passion. You cannot materialize one's passion—be it music, painting, or nature-study—any more than you can value one's artistic temperament in terms of £. s. d.

One likes to study birds because they are the most happy and healthy of creatures. Whoever saw a sick bird, except in caged confinement? Birds in the open are always joyous. Listen to their lively lays at break o' day—never ill. Besides the beauty of birds, the colour and markings of some eggs are most attractive. Their graceful shapes, whether globular, oval or elliptical, are all emblems of true infinity. In my book, "Nests and Eggs," maybe I have said sufficient descriptive of the eggs and the domestic economy of our Commonwealth birds. Perhaps I may here recite a few incidents in travel that occurred while procuring my specimens.

I have been twice shot at. In the early days of Ferntree Gully (Vic.), we (four of us) were on the road, at night, to the Dandenongs, walking every yard of the way. Near what is now known as Wheeler's Hill a drunken fellow wanted to know "Who the —— are you?" We replied, "Look out, our guns are loaded." "Oh, is it shooting you mean? I'll meet you with a gun." So the rascal said, rushing into a shanty near. In the meantime we took to our heels and turned sharply aside into the bush. When the drunkard reappeared, he, supposing we had continued our way up the road, fired in that direction. We could distinctly hear the "ping" of the bullet. Being about midnight, we camped in the scrub where we were, and continued our journey at day-dawn. By the way, I recollect that on this trip we saw the lovely little chestnut-shouldered grass-parrot.* It used to frequent the fertile flats of Ferntree Gully. We believe that this beautiful bird is now extinct. On another occasion we were shot at in broad daylight by a

* The turquoise; formerly imported in fair numbers. The extinction of some of the most beautiful grass parakeets of Australia is a sad loss both to Nature and aviculturists.—ED.

land-owner, somewhere in the locality of what is now known as Murrumbeena (Vic.) It is true the landlord warned us off his grounds, but we had found a bronze-winged pigeon's nest in a knot of mistletoe, with the bird sitting, and we were loth to leave. Presently we espied the owner sneaking down upon us along an acacia hedge. One of us shouted, "Look out, he's got a gun," and away we sped. There was a "bang," and buckshot scattered about us. We have not been in that paddock since. Another shooting incident was connected with a bullock. In an open paddock near Oakleigh (Vic.) we were charged by a wild Gippsland bullock. The beast would have certainly horned us had not one shot it in the face, and temporarily stayed its progress. We were sorry, but there was no other means of escape.

On two occasions horses bolted with the coach I was on, each time from the same cause—namely, a thoughtless tramp basking in the sun alongside of the road—his head on his swag and his knees drawn up before him—a scarecrow sufficient to frighten the meekest of horses. Returning from Ferntree Gully with a lyre-bird's nest sewed in some sacking—which, by the way, together with a pair of birds, I donated to the Royal Scottish Museum, Edinburgh—we had just crossed Dandenong Creek, and, turning a sharp curve, the pair of horses suddenly caught sight of the recumbent figure. However, we did not break a buckle. The other occasion was in Riverina. This time the team consisted of four-in-hand. Being on the box seat, I noticed the figure of a man ahead upon the ground (I thought the driver saw it too, but he evidently did not). I immediately thought of the Dandenong Creek episode, and called to those inside to "look out for some fun." No sooner had I uttered the words than the team left the track and tore through the timber, a great bushy tree nearly sweeping the driver off the seat. However, courage and good horsemanship steadied the team before any damage was done. It was a very narrow escape, and we were miles from anywhere. But you should have heard the poetry heaped upon the head of the unfortunate "sundowner." I never knew that a coach-driver's vocabulary was so inexhaustible.

Incidentally, through collecting trips I have enjoyed some sport fishing—seine fishing by the sea (notably on island excursions),

and hooking, with rod and line, cod and plump perch out of the broad-bosomed Murray. And members who went with the R.A.O.U. to Kangaroo Island will remember the creeks there alive with bream, which were sometimes hooked two at one cast of the line. But I never took to shooting birds for sport. "Virtue has its own reward." On that strip, once sand and scrub, between St. Kilda and Sandridge (Vic.) which is now a forest of houses known as the Beaconsfield-parade, I used to kill snakes and pick up Dottrel's eggs in doublets. There were swamps contiguous, teeming with wild fowl. At a wheeling feathered flock one day a man fired. Out of the destruction two Wood-Ducks fell near me. As the man was not legally entitled to them, I bagged both birds and bolted home.

Numerous Ducks used to fly overhead in small flocks up and down the River Yarra. At evening they usually flew up stream, offering tempting shots for long-ranged guns. One evening when "mooning" near Combo Swamp, Toorak, I heard a distant shot round the bend, and some considerable time afterwards a fine, fat black duck fell at my feet, stone dead. There being nobody about, I quietly picked up the bird and took it home.

Once I was in a slight railway accident. The carriage in which we were travelling left the rails, and bumped considerably when off the right track—indeed, nearly capsized before the train was pulled up. What concerned me most was a bright and beautiful clutch of kestrel's eggs, which I had, unblown, in a "billy" beneath the seat. I took the eggs that day from a crevice of a cliff overhanging the Werribee River.

Someone has asked me what I consider my greatest finds. I can hardly say. But those of most lasting memories to me are probably the finding of my first lyre-bird's nest—the excitement of flushing the sitting bird, with its loud, whistling shriek of alarm as it flew down gully. Then, when your excitement subsides, there is the admiration for the picturesque nest, with its virgin forest and fern surroundings. Or, perhaps, it would be the first finding of an Emu's nest. You notice the noble bird tear away through the belt of box timber, and on going to the starting point there you behold, upon a bed amid the cane-grass, the clutch of eight or ten large and beautiful greenish eggs. Or it may be when you land on an out-of-

the way islet at a sea-bird rookery. Then your nerves tingle from head to foot in an ecstasy of extreme delight while hundreds of wild birds, on shivering wings, are screeching overhead, and you see mottled and curiously marked eggs amongst grass, succulent ice-plant, or on the bare sand, as the case may be, in numbers dotting the landscape.

Another indelible memory was a scene I witnessed only last year, when, with a genial companion, I visited a Swiftlet cave on a verdure-clad islet—a secluded spot set in a blue sheet of coral sea. It was the most splendid of serene summer days, and the place the most picturesque that one could imagine. Bean-trees wreathed with rosy flowers, and umbrella trees and palms, reared their graceful forms above luxuriant shrubs. Underneath were rich, rocky galleries of native gardens where grew great patches of an ornamental polypodium, bearing brownish, flat, embroidered fronds. Here and there, on tree or stone, were orchids conspicuous with bowing heads of bottle-brush-like flowers—*i.e.* composed of clusters of tubular flowerets of waxy appearance, variegated crimson, green, and white (*Dendrobium Smilliae*, von Mueller). From the dazzling sunlight we entered the deep shade of a canopy scrub, then a gloomy cavern, where between 50 and 60 Swiftlets' nests could just be discerned attached to the roof. A score of nests contained each a single pure white egg. Closer examination by the aid of a pocket electric lantern showed the nests in groups, distant from the floor from 4 feet up to about 7 feet. Some nests were adjoining, so that tails of the tiny brooding birds overlapped. The nests were spoon-shaped, about $2\frac{1}{2}$ inches in diameter, with a short handle-like appendage cemented to the rock, and were composed of shreds of grass, moss, &c., intermixed with a kind of gluten. The little birds on being disturbed, flew quietly, save for a few feeble notes, like fairy forms about the cave, or in and out, there being more than a single entrance.

In concluding this brief sketch of some of my reminiscences, I must say that "the lines have fallen unto me in pleasant places." I have often thanked the Almighty for my being and for the wonder of His works.

MONTHLY NOTES FOR JULY.

By SECRETARIUS.

With the advent of July we shall expect, or at any rate hope, to be in the very thick of the breeding season, but we must remember that our summer corresponds with the winter of Australia, so don't be surprised if Grassfinches (Gouldian finches *c.g.*) go into moult and lose interest in domestic affairs. If many of our birds are not nesting there is some fault somewhere. And the successful aviculturist must make it his or her business to find out where the fault lies. Now, first and foremost we must be sure we have a "breeding pair." Many birds are apparently sworn to celibacy. Others only indulge in platonic friendship. A third class develop unnatural affections for birds of another kind. Who could imagine that a hen Dufresne's waxbill would evince a strong attachment for a Diamond dove? And yet such is the writer's experience. It is not sufficient then merely to have "a pair"—they must be a breeding pair, *i.e.* a pair that wishes to raise a family. If you have not, no amount of coaxing will induce them to nest. You must effect an exchange with somebody or buy another pair (if possible), separate the shirkers and mate them up afresh. Of no creature in the world is it more true than of the bird that "absence makes the heart grow fonder." If you cannot effect an exchange try and catch up the hen bird, cage her, feed her up well, and give her a supply of animal food. Then turn her in with the cock again in ten days time. There will soon be an announcement in "The Times" in most cases.

The next commonest cause is that one or other of the birds is past caring for domestic affairs. For such an one there is no cure but an old age pension. Old birds are easily distinguished. They are humpy as a rule. The feathers are not sleek and glossy. Their features get very "*prononcés*." The legs get thick and scaley, and altogether their sole interest in life seems the food vessels. Beware of birds with feathers missing. It may be due to feather plucking, *but* it may not. Don't buy waxbills that the prolix advertiser tells you he or she has had "in an outdoor aviary for six years," any more than you would buy a house that the owner had had for 25 years, even if it had never let them down.

The other common cause of sterility is perhaps too obvious to mention, and yet perhaps of all *the* commonest. It is that you have not got "a pair" at all. Many birds are absolutely impossible to sex except by their "demeanour." The word is horribly pedantic, but is commonly used by writers on bird topics as illustrating one bird's behaviour towards another. Fancy talking of a human being's demeanour towards his lady love—or her swain! But even this "demeanour" may lead one astray, as many birds evince the greatest affection towards birds of their own sex if none of the other sex is present. Only experience and careful study will enable you to sex birds by their behaviour towards one another. But if your birds don't nest think of the sex question.

Another cause of not breeding is improper food. I don't mean insufficient food but improper food. Undoubtedly the temperature, coupled with a sudden abundance of food, makes birds feel very pleased with themselves and that awakens a natural instinct to breed. Birds to be in breeding condition must be got into a high condition, and the difficulty is to get them just high enough. Too high and the cock will give the hen no peace. Not high enough and the eggs will not be fertile, even though pairing may take place. For seed-eaters, flowering grass, a few mealworms and live ants' eggs will all help to get the birds into the right condition, and of course plenty of exercise, sunlight, and fresh air.

For softbills, live food is practically speaking necessary at all times of the year, but, if we wish them to breed, live food becomes an absolute *sine quâ non*. In the earlier months our mainstay has always been, and must remain, mealworms. In addition, live ants' eggs, gentles, and wasp grubs may be given to them.

But how many give mealworms ("giants" often), just as they are, to all birds and expect them to thrive on them. It is quite equivalent to our swallowing a whole rump-steak or loin chop. For all birds, mealworms are better chopped. For the small tits and warblers each worm should be cut into four, when you will find that the head and tail end are not of much account, just as they are not thought much of by the gourmet when salmon is under consideration. Not only are they more digestible when cut up, but if mixed with the insectile mixture, particles of the latter adhere to the

worm and ensure a proper mixed diet. Another common cause of failure to nest is the absence of proper nesting accommodation, or perhaps the absence of proper material to build the nest with. One is almost a corollary of the other. You wouldn't expect budgerigars to nest in the fork of a tree, nor a chaffinch to nest in a barrel. Considering the weird ideas on the subject some people have it is a wonder, and no small credit to the birds, that they nest at all. But perhaps what is even of more importance is the proper supply of nesting material. In a natural garden aviary, another well-worn avicultural expression, they will probably find much of what they want. But in a "mixed" series such things as tow, unravelled string, cocoa-nut fibre, a handful of "meadow hay," not inferior hay made from rye grass, which is too stiff and unyielding, but fine meadow hay, bast or raffia *cut up into lengths*, fine twigs for birds of the cardinal and sparrow class, and, finally, those little packets of moss and horse-hair may be added to the aviary, but be sure to tie the cotton, by which it is meant to be suspended, quite short. On more than one occasion one has seen birds entangled and eventually killed by these cotton threads. That is why the bast should be cut in lengths. Cases have occurred where a bird has been hanged by the neck, until he was dead, by bast. A member, Miss Chawner, recommended paper shavings for sugar birds. If you are anxious to go in for breeding or trying to breed British birds get a few newly-made nests of the species you are trying to breed and tear it to pieces in the aviary. Many sugar birds use spiders' webs as the foundation of their nests. Lambs' wool is a very good substitute for spiders' web. Tow is good but too short and flimsy. A piece of rope unravelled is far better. Horse-hair is another thing birds, who suspend their nests, like to get hold of. Failing all else, sometimes an old nest from the hedgerow may be fixed in a shrub in the aviary and occasionally some birds will take to that.

We must leave nesting materials and pass on to other causes of non-reproduction. Certainly one of the most insidious causes is overcrowding, particularly with interfering and pugnacious birds. Not always large birds, but, often, they are mere impudent scraps such as the bibfinch, or worse still, in that respect, the common zebra finch. And the little wretches are fearfully difficult to detect,

for when the aviarist is near they are patterns of good behaviour. As few pairs as possible in one aviary is the golden rule. That, we may take it, is the secret of Dr. Amsler's and Mr. Teschemaker's success.

Another cause of poor breeding results is the introduction of fresh birds into the aviary at any odd moment the bird-keeper has a fancy for. It only upsets the birds for 24 hours, but 24 minutes would spoil a clutch of eggs or cause the birds to desert.

Finally, for the purpose of this article, we come to too much interference on the part of the owner or attendant, and also, in the same category, too many open-mouthed wonder-struck visitors. Birds take their domestic duties very seriously, and with a view to perpetuating the species, not to amuse and "interest" a lot of unwieldy looking and inquisitive humans. Long dissertations on *any* subject in the aviary are also singularly unappreciated by birds. As also are banging of doors, hammering in nails, or playing a tune in a minor key on the wire netting. Strange dogs, which the friend of your bosom brings with him or her, upset the birds even more than a visitor does in a school class. Really birds do not want entertaining half as much as we poor humans do. All they ask is to be left alone as much as possible and to be allowed to have peaceful neighbours. One is told, to the point of weariness, that the birds soon get used to your going in and out and take no notice of it. True, but so does the felon get used to bread and water when in gaol. It is not from choice.

To sum up, if the birds are not breeding there is a cause. It is for the true aviculturist to find out the cause, and when found *remedy* it.

REVIEW.

"BRITISH BIRDS."*

Mr. A. Thorburn's third volume of this fine work has been published, and is in no way behind the first two volumes in quality.

[* *British Birds*, written and illustrated by A. THORBURN, F.Z.S., with eighty plates in colour, showing over four hundred species. In four volumes. Vol. III. LONGMANS, GREEN & Co., 39, Paternoster Row, London, 1916.]

Indeed it may be thought by some to excel ; for the author, who is his own illustrator, is thoroughly at home when painting wild fowl and game birds, so that, as would be expected, the groups of different species of ducks make really fine pictures, especially since many of these birds naturally flock together, and therefore to depict several species in this way is more according to what is actually seen in nature than in the case of such families as warblers, thrushes, and so on.

Looking at the plate which shows the woodpigeon, stock dove, rock and turtle dove, as well as the sandgrouse, one can only have figures of birds which one does not see closely grouped in wild life ; but the plate with three species of Scoters and Steller's eider duck, and again that of pochard, widgeon, and Garganey teal, etc. appeals as completely natural.

The frontispiece, shewing a group of great bustards, with a pair of lapwings wheeling in the air, is very pleasing as well as sunny, making one regret that such a scene, once common on the Berkshire and Wiltshire downs, etc., in England, is a thing of the past.

The plate of a male and female capercaillie in a snow covered forest is beautifully drawn and coloured, as is also that of a group of ptarmigan, some in autumnal and some in winter plumage. In plate 58, a covey of partridges on sandy ground, backed by broom and with a large bunch of thistles in down in the foreground, we have a picture in the painting of which Mr. Thorburn is thoroughly efficient ; the pairs of red-legged partridges and common quail being sufficiently separated in the grouping as not to confuse it.

There are also pictures of geese, storks, herons, and the like.

Altogether a volume worthy of its place in the bird-lover's bookshelves, along with its companions, which are perhaps there already.

H. D. A.

MORE ARTICLES NEEDED.

The Editor anxiously asks for more munitions, or the "Avicultural Magazine" will have to cease firing and surrender. A fact !

As these words are being written, a grey parrot outside the

room has given vent to its feelings by remarking "To hell with the Kaiser"; to which the Editor responds "Hear! Hear!" and with deepest feeling and intention. But for that outrageous and infamous spirit, along with his supporters and satellites, the members of our Society (not to mention the rest of the world!) would be peacefully ensuing their usual occupations. The Editor understands as well as anyone how vastly the mind is nowadays distracted, even when there *is* leisure to write, and how difficult it is to keep up interest in anything which does not immediately concern the awful horror of the great war; but we, like our soldiers and sailors, along with our Allies, *have* kept on; let us, like them, continue to do so. So the Editor writes "*Please send what you can.*"

CORRESPONDENCE, NOTES, ETC.

SNOW GEESE PERCHING IN TREES.

THE DUCHESS OF BEDFORD sends the following very interesting note, and one wonders whether it is not an utterly unusual habit on the part of the geese, which were hatched at Woburn Abbey:—

"During last month (May) I have on several occasions seen Snow geese 'perching on a Wych elm. They appear to be attracted by the young winged seeds."

M. BEDFORD, Woburn Abbey."

The Duchess added that it was a most curious sight. H. D. A.

'BRANGLINGS' (WORMS) AS FOOD FOR BIRDS.

DEAR MR. ASTLEY,—May I make a minor correction on a point in the June magazine. p. 234, in the monthly notes by 'Secretarius'? I would like to say *à propos* of worms, that 'brandlings' are the small red worms striped with yellow, that are found only in manure heaps. These are very bad either for birds or reptiles; in fact, almost poisonous.

The worms referred to are not brandlings proper, though very like them, except that they are not so striped. Yours very sincerely, TAVISTOCK.

SUPPOSED TROUPIAL.

SIR,—With reference to my supposed troupials (about which Dr. Hopkinson made the suggestion that they might be bobolinks), Dr. Butler was quite right when he named them Black tanagers. I recently bought a cock bird, exactly similar to my male, from Mr. G. E. Rattigan, and he informed me that it is the Lesser black tanager. It is now mated with one of my hens. I think the white in the tail of the hen is abnormal, as the second hen bird shows very little.

Yours, etc., WM. SHORE-BAILY.

THE "SHELL IBIS." *Anastomus oscitans*.

Mr. WILLIAM JAMRACH very kindly sent two photographs of Shell Ibises in his possession, but as funds are low, we regret we must abstain from publishing them.

These birds are really storks, rather than ibises, and are called *Shell Ibises* from their cleverness in extracting unio and molluscs from their shells.

They nest in trees, and more than thirty nests have been observed in one tree. They are also called open-bills, owing to the formation of the beaks at the sides.

Anastomus oscitans is an Indian and Indo-Chinese species; white, with black scapulars, remiges and rectrices, yellow bill and legs.

Mr. W. Jamrach wrote:—"They are found in the Punjab on the banks of the rivers fishing for cockles and mussels, etc. Adult birds, when caught, never survive, but all the immature birds take readily to raw meats on which they thrive wonderfully well. Their habits with other waterfowl are most inoffensive, notwithstanding the formidable appearance of their bills. At present they are represented in the Zoological Gardens of Amsterdam, Berlin and London, and probably Cologne, and also in the private collections of several amateurs in France."

Their bills rather remind one of that of the Jabirus.

STRAY NOTES ON THE BIRDS OF THE COUNTRY-SIDE.

ERRATA.

June No. p. 229, line 19, "esconsed" should read "enseoned."
 p. 229, line 27, "Martins" ,, ,, "Moutins."
 p. 230, line 28, "running" ,, ,, "cunning."
 p. 231, line 31, "indifferent" ,, ,, "difficult"

This article was intended for the July magazine, but was published in June at the last moment, so that the writer never received proof sheets. The Editor had to be away from home, and the printers are much handicapped in these days of the war.

To the Editor of the Avicultural Magazine.

DEAR SIR,—It may interest you to hear that the Wren (whose tree creeping propensities I reported some weeks ago) chose rather an unusual nesting site, his young have just flown from a nest built inside a last year's swallow's nest in the roof of my stable. I am practically certain that the nest belonged to the same bird which I saw "tree creeping," the shed into which he flew when leaving the birch tree is built on to the stable in which the nest was built, and all this spring a pair of wrens always frequented the near neighbourhood of birch and stable (which are only three yards apart). I have never previously come across a wren's nest in a similar situation.

HUGH WORMALD.

A wren built in an old nest of a swallow in the early spring at Brinsop; the nest being within easy reach of one's hand under a doorway, and the wrens had to come over the roofs into the courtyard, not only to arrive there, but also to carry nesting materials.—ED.



WHITETHROAT GOING TO YOUNG.
(*Sylvia communis*.)

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AUGUST, 1916.

THE LESSER WHITETHROAT.

Sylvia curruca.

By Dr. A. G. BUTLER.

Early this year I heard a note in my garden which was familiar to me, but which I could not recognize as that of one of the usual frequenters of my home. I occasionally caught sight of a tiny bird at some distance which evidently produced a monotonous little song and later my son spoke of a small warbler which had strayed into his greenhouse and which he had released but which he had failed to recognize as a habitual frequenter of gardens.

On June 22nd while the gardener was trimming and cutting in the hawthorn hedges which screen one end of my rose-beds, he discovered a small nest near the top and at the end of one of the hedges in which a honeysuckle is intertwined, and he informed me that he had found a grey-tit's nest with young in the hedge. I told him that, unless it was a long-tailed tit it would not build in the hedge, but in a hole, and he replied that the parent birds had rather long tails.

Of course I proceeded to investigate; the nest was about seven feet from the ground and very small. Of course I saw at a glance that it was no tit's nest, whereupon my gardener suggested that perhaps it was a hedge-sparrow's! "No" I said "a hedge-sparrow builds a nest often as large as that of a greenfinch, get me the steps and I will tell you in a minute what it is." As soon as I was able to look down upon it I recognized it at once as that of the lesser whitethroat, and of course the alarm-note *kek, kek, kek* which sounded in the neighbouring trees was explained.

Presently, as I left the vicinity of the nest, a little bird alighted on one of my pergolas with its bill full of tiny moths; it was very restless and evidently wished me farther away; at last it flew over the hedge so as to approach the nest from the back out of my sight, and I have since observed that it invariably does this when I am anywhere near: if it reasoned deeply, it should be aware that after I had looked down upon the nest and seen its babies, there could no longer be any profit in the attempt to mislead me as to the presence of its home, but its actions are probably instinctive and therefore are persisted in though it may be aware that I am not deceived thereby.

I don't think the lesser whitethroat often builds in a garden unless there are woods or copses close by: most of the nests which I took in days gone-by were found in hawthorn bushes or hedges on the outskirts of woods and at a height of not more than three to four feet from the ground or in country lanes in wooded country: that the bird should build at a greater altitude in suburban garden shows good sense, for otherwise it would be pretty certain to be raided by one of the numerous cats in the neighbourhood.

The lesser whitethroat is a very nervous little bird and becomes extremely fidgety when anyone approaches its nest; moreover my experience of it is that if you remove a single egg from its nest, it deserts it at once; indeed I believe that if you took out an egg and replaced it, desertion would take place, just as I proved that it did in the case of the common wren. In the latter case on one occasion I stood at a distance watching a wren building, and unfortunately she caught sight of me and deserted immediately, never completing the structure: yet in the absence of the mother I have removed an egg from a wren's nest with a metal spoon and she has subsequently returned and continued to lay. A bird's scent must be very keen and yet I have heard men question whether it is not entirely deficient in the sense.

One can never mistake the nest of the lesser whitethroat for anything else, it is a very firmly built little structure and about the size of that of the redpoll, perhaps a trifle smaller, but not in the least like it; indeed, excepting that it is much more rigid it bears some resemblance to the larger and usually somewhat flimsy nest of

its greater relative popularly known as "Peggy whitethroat." In habits the two birds differ considerably: one never sees *S. curruca* fly upwards singing and then tumbling helter skelter downwards like the greater whitethroat, nor have I ever known it to build its nest in stinging-nettles under a hedge as *S. cinerea* often does: its eggs are of course much smaller and much more boldly spotted, and their number is more frequently restricted to four than is the case with *S. cinerea*; thus out of thirteen nests of the latter species, which I retained to illustrate variation in my collection of nests, eight have five eggs, two have four and the other three are palpably incomplete clutches.

I have seen the greater whitethroat in my garden, but I have never known it to nest there; it always prefers to build low down and that would be fatal where cats abound; it was a real pleasure to me to discover that the smaller bird had elected to make its home with me. By the way I don't see why Peggy should not follow its example, she did once build and lay in a hedge at the end of my former garden before I moved to Beckenham, but I tried to persuade her to rear eggs she had not laid and she retired in disgust.

NESTING OF THE MALABAR PARRAKEET.

Palæornis peristerodes.

By Dr. L. LOVELL-KEAYS.

The Malabar parrakeet belongs, of course, to the great class of ring-necked parrakeets or genus *Palæornis* and in common with all the ring-necked, comes, as its name implies, from the old world. The genus *Palæornis* is not very interesting although, after the African grey parrot, perhaps one of the best known. Every Tommy Atkins brings back a "poll-parrot" for mother on his return from India and even if he does not find the bird interesting it never fails to excite admiration and a certain amount of envy of the (?) less fortunate neighbours. All the ring-necked parrakeets are handsome birds, but the Malabar is perhaps the most beautiful of all. The exquisite greens and delicate tracery of the wing feathers must be

seen to be realised. The brilliant orange-red beak makes a striking contrast to the rest of the colours and the long narrow yellowish tail adds an air of distinction to the bird. The hen bird is painfully sombre in colour. A uniform dull green from head to tail with a plain black ring round the neck. Not even a red beak brightens the general colour scheme. To look at she is about as disappointing a bird as you could find in the land of parrakeets. No exquisite emerald green ring adorns my lady's neck. Undoubtedly nature intended she should be simply and solely a household drudge.

I obtained my cock bird some years ago at Jamrach's. He was not much to look at and I acquired him for the very modest sum of 30/-. However, in a good-sized aviary with a carpet of sweet-tasting grass, he turned out a perfect bird and won great honours for his owner at the International Bird Show in 1914.

When in 1915 I decided to give up keeping birds I advertised it for sale. I had never been able to hear of a hen and didn't believe one existed in England. But one November morning the post brought a letter from Canon Dutton offering me a hen Malabar in exchange for a hen blossom-head. Could ever an offer be more generous? It would have been a privilege to have given him the blossom-head. Nevertheless, he insisted on sending me the hen Malabar in exchange. The bird had been kept in a temperature of 65° F. and he advised me to keep it in a bird room until spring. Now my experience of ring-necks is that they are almost as hardy as the polar bear, and in January I turned her out into a well-sheltered but open-air aviary to take her chance. She never ruffled a feather and by February she was house-hunting. I could see that she could not find what she wanted out of, at least, a dozen barrels, so I put a 9-inch barrel up under some eaves. This pleased her ladyship immensely and very quickly she took possession. I have forgotten the exact date, but at the beginning of March she had laid two eggs in the selected barrel. They were, like all parrakeets eggs, roundish and white, also slightly polished. Incubation lasted as near as I can tell just about three weeks. During this trying period my lord, did nothing but squawk — (his vocal efforts are not a screech but a true squawk) — impressing on the other parrakeets what a fine fellow he was and pointing out what a mag-

nificent collar he wore. But, frankly, the others were distinctly bored. True he did deign to feed the hen when she came off for a constitutional. He was not a very brave or bold bird and invariably left her to do the burglar hunting. I fancy that lady Malabars have a pretty poor opinion of the sterner sex. He certainly has no domesticity in his tastes at all. Only one egg hatched out and the chick did not differ in appearance from any other young parrakeet. All went well for about a fortnight. The mother bird was most attentive and fiercely resented any other parrakeet approaching the barrel wherein reposed her precious infant. My delight was simply unbounded. I felt absolutely confident of success, but just as everything seemed most promising, one morning when I went into the aviary, to my surprise the hen bird did not leave the nest, a thing I had never known before. I feared for the worst, viz.: that the hen had deserted her chick. It *was* a disappointment. However, in aviculture we become philosophic after a while and after many disappointments. But I never dreamt of, much less anticipated, the full tragedy that met my gaze as I went to investigate. For there lying on the ground just beneath the nesting barrel lay my hen Malabar parrakeet *dead*; done to death by some feathered Hun. I have suffered remorse and disappointment many many times before, but this seemed to crush me utterly. Some brute must have attacked her from behind and eventually googed the poor bird's eye out. My wife, all too late, told me she had seen a mealy rosella squabbling with poor little Mrs. Malabar once or twice and careful examination indubitably fixed the guilt on this beast of a bird. He proved himself a real Hun once before, by killing my tamest of tame orange-flanks, but as I thought they were the aggressors, I forgave him. The sad part was that I knew I was overcrowded and had given the order for the other parrakeet aviary to be repaired as it had collapsed under the weight of snow earlier in the year. Still had I known there had been fights I would have caught the rosella and rather have wrung his neck than allowed him to remain at liberty. The stable door is locked now—of course it is—but I have no Mrs. Malabar and no baby Malabar to cheer me now, and every time I enter that aviary

“I feel like one who treads alone the banquet hall deserted.”

I have advertised for weeks for another hen without any success. I shall not meet another kind friend like Canon Dutton. I cudgelled my brains half the night considering how I might obtain one. I was besieged by a host of vain regrets and a thousand "If only's." There was no echoing response to any of my unuttered suggestions. Finally sleep, the mighty but gentle one, crept up softly and before the next hour could strike I was in "the beautiful land of nod" enjoying perfect weather and fondling a full-fledged young Malabar. But at 7.30 came a rap at the door and I awoke to a "hopeless dawn."

* * *

POSTSCRIPT.—Since writing the above Canon Dutton has most generously allowed me to have another hen Malabar he possessed and, although I have no hopes of breeding Malabars this year, at least the dawn of a new era appears to dissipate the clouds of remorse and disappointment.

ANOTHER ATTEMPT AT BREEDING YELLOW-WINGED SUGAR-BIRDS.

Cæreba cyanea.

By Miss E. F. CHAWNER.

My hen Yellow-winged Sugar-bird came into breeding condition by the last week in April and called lustily for a mate, but as my cock had died during the winter (I find the cocks of this species decidedly more delicate than the hens) and I could not hear of one for sale it looked as though she must call in vain. By the kindness of Mr. Seth-Smith, however, I did procure a very nice cock which had been offered for purchase to the Zoological Gardens and was not required there. He arrived on May 13th, was put out after a brief quarantine and the hen took to him at once.

It was very pretty to see them together when the cock was courting, his beautiful turquoise crown erect and wings expanded showing their bright yellow feathers; on these occasions his wife looked very much pleased, shivering her wings and throwing back her head until the long beak pointed straight up, the show generally

ended by both birds squeaking loudly several times in succession. The cock also sang a good deal, a pretty little soft warble very unlike the usual harsh call.

I placed tow, fine white paper shavings, and deer hair, with some carefully selected fine hay ready for them and awaited events. The hen soon began to carry material to a Cypress branch fixed in the same place where she built last year; the cock followed her everywhere, encouraging her with his little song and frequent displays, but he never touched the nest himself nor fed her. As soon as I knew where the nest was going to be, neither I nor the aviary boy went into that part of the shelter at all, for I am quite of one mind with "Secretarius" that no matter how confiding the birds may be at other times, when nesting the fewer interviews the better, especially during the early stages; later on, when there are young and the mother looks to be supplied with food for them, she may not so much object to an occasional visit from the person who usually waits on her, but strangers should *never* come within sight or hearing until the young can fend for themselves. But this is a digression and I must come back to my sugar-birds.

Building went gaily forward, a great deal of paper was used in the foundation and twisted round the boughs between which the nest was slung, it was finally lined with hair and a few bits of hay, the tow scarcely used at all (I found out these details later) and it was completed by May 24th. I do not know when the first egg was laid, but incubation began about the 27th or 28th. The hen sat very steadily, only dashing off occasionally to feed and stretch her wings, and on the 15th June I found egg shells at the further end of the aviary and she was anxiously watching for gnats and small insects, which she caught in mid-air and carried back to the nest. With a butterfly net I swept bushes and meadow until I had a good supply of winged and creeping things and arranged the net at a respectful distance from the nest.

The little mother eyed it for a moment, then as the contents began to sort themselves and move about she hovered in front of it making her selection. The cock did the same, but I regret to say from purely selfish motives. Backwards and forwards she went and then settled down to brood her babies. This continued at fre-

quent intervals all day and every day, the hen doing all the work and the cock merely looking beautiful, which he certainly did to perfection.

Then came one of the many cold rainy days of June, when "sweeping" was impossible, so I tried live ants' eggs and green fly. I was not surprised that she rejected the former, but it was a blow that she scorned the green fly, which is usually willingly accepted by breeding birds. It was too early for wasp grubs and only mealworms were available. I was reluctant to give them, because I do not think them, even when quite small, digestible for tiny birds, but it was that or nothing. She took them readily enough, macerating them in her long beak before giving them to her young. I had every opportunity of observing her method, because I had to stay on guard in the aviary or the sugar-birds would have had but little food. A pair of indigo buntings in the same aviary adore mealworms and would have emptied the dish while the sugar-bird carried one beakful, she never took more than one insect at a time and was deliberate and very gentle in all her movements at the nest. After each nestling had received the first mouthful she waited and carried away the droppings before giving any more; sometimes she swallowed them, but more often dropped them at the further end of the aviary. Soon the mealworms justified my bad opinion of them, for the droppings became very constipated and the young had evident difficulty in passing them. I tried mashing up the mealworms and cutting them in little pieces, but (*Secretarius please note!*) the mother would not feed with them or anything else that was not *really* alive. Luckily some smooth green caterpillars turned up and they quickly put matters right.⁵

The weather improved and, by dint of hard work, I supplied the little family and warded off the indigo buntings. I would have turned them into the other aviary, but this contained their deadly enemy, a remarkably truculent rainbow bunting, who thirsted for the blood of the cock indigo and was always fighting him through the wires until both combatants were afflicted with baldness. The indigos meanwhile started housekeeping on their own account, and built a massive and very untidy nest, like a house sparrow's, not far from the sugar-birds. They play this game every year and then the

hen drops eggs anywhere but in the nest and considers that she has done her duty. This year she began in the same foolish way, but I saw she spent hours perched as near as the sugar-birds would allow, watching their young, and at last she took to her own nest and actually laid and incubated steadily. Such is the force of a good example!

Meanwhile the sugar-birds grew and prospered and, one day, while their mother was bathing, I took my first peep; they were then a week old and had their eyes open. They reminded me of young hedge sparrows, except that their gapes were yellow and beaks large and clumsy-looking, but not long, in fact they showed very little of their parentage. They wore the Red-Indian sort of coiffure favoured by most nestlings, and the wing feathers were just showing through the quills. There were two, which seems to be the usual number in sugar-bird nurseries, and one was certainly larger and more developed, though both looked healthy and plump.

The next week passed in the same way, save that naturally they required larger supplies, and I had to work early and late to satisfy them. They had come just at an awkward time, too early for wasp grubs and too late for the tree-feeding caterpillars, which usually abound during the latter part of May, or for those particularly plump and succulent caterpillars so beloved of all birds, which roll up leaves of stinging nettles. We struggled on, however, and the young birds were feathering nicely and their voices could be heard distinctly from the other end of the aviary. I began to hope that soon they would have their diet supplemented with cake sop or at any rate banana, their beaks were beginning to lengthen, they moved about the nest and sat on the edge of the nest, surely they would soon leave it. But with the closing days of June the weather grew worse, heavy showers continually wetted the grass and made "sweeping" impossible, a bitter wind blew, driving all flies and gnats into hiding, and this lasted until the first of July. Only mealworms were available, and I tried to persuade myself that the babies being older their digestions must be stronger. Their mother knew better, and was plainly not satisfied, but there was no help for it.

On the evening of July 1st I noticed that the nestlings were not hungry and had to be coaxed to gape for food; the next

morning, Sunday (why do all disasters from burst pipes to aviary catastrophies invariably happen on Sunday?) when I brought "early tea" as usual I found one young bird on the ground and the parents wildly excited, so much so that the smaller bird was forgotten and all but dead from cold. It was taken to the kitchen and presently revived, and I picked up No. 1 and restored both to their nest, saw the mother feed them and went off to church. When I came back an hour later the best one was dead in the nest with a mealworm hanging out of its beak. I thought at first it had been choked, but now I believe that it voided the mealworm just before death. It was a beautiful young bird, well feathered about the body and quite plump. No. 2 was still lively and I hoped to save it at least, but still only mealworms could be supplied and presently it refused food and by the evening had joined its brother. I wish now I had tried to rear it by hand, but most likely it would have died all the same. Both had undigested mealworms in their crops, and I feel sure that could the food have been more varied they would have been fully reared.

The parents were very sad for some days, especially the mother who frequently visited the empty nest calling the while and then returned to her favourite perch to brood mournfully over her loss. I am afraid she looked on me as the malefactor.

My object in writing so fully about this attempt and its failure is to show that, given a normal summer and leisure and opportunity to get varied living food there would be no great difficulty in breeding this species of sugar-bird. A few mealworms do no harm, for instance I think they could be used for the first meal of the day before the dew has dried sufficiently to admit of "sweeping" and other food might follow it up. I suppose that soon after they have left the nest the young ones would be introduced to the usual diet of sop and fruit. I have seen it stated that sugar-birds build domed nests: but all the three species, viz., blue, red-throated, and yellow-winged, which went to nest here, made no attempt at anything beyond the usual cup very daintily built. Of course they may do differently in their native country, it has often been noticed how birds will adapt themselves and vary their custom under artificial conditions, but it is rather difficult to see why this particular change

should be made. The actual cup is small and rather deep and the foundations very firmly and tightly fastened to the boughs among which the nest is built, generally in a Cypress or similar evergreen-

From the appearance of my nestlings I should say that the immature plumage would resemble the hen's.* I sent one sad little corpse to our Editor who has been most kind and sympathetic throughout, and have the other here in spirits. If fate only spares my good little hen, I trust we shall try again and achieve complete success.

P.S.—July 17th. There is balm in Gilead! they have built a fresh nest, laid, and begun to incubate.

HYBRID PIGEONS.

Chlorænas speciosa and *C. maculosa*.

By Monsieur JEAN DELACOUR.

Translated from the French.

In April, 1914, I received a pair of Cayenne pigeons (*Chlorænas speciosa*), which is in my opinion one of the most beautiful of the graniverous species.

In size a little smaller than the wood-pigeon, and of a very graceful form, this pigeon has rose-coloured beak and feet, a brown head, the whole neck and breast marked with black speckles on a white ground, the back and the wings red brown; the tail brown.

The female resembles the male, but the colours are less vivid. These birds were in good condition on their arrival, but the female was unfortunately killed a short time afterwards by some crowned pigeons, which occupied the same aviary. I thereupon put a female spot-winged pigeon (*Chlorænas maculosa*) with the male, and she laid during the summer, but the eggs were clear.

During the month of April, 1915, she again laid, a young bird being hatched, which was easily reared; and two more clutches in June and August produced two more young ones.

* The young bird that Miss Chawner sent was in fine condition, resembling the adult female in colouring. We sincerely wish full success with the second brood, and greatly sympathize over the loss of the first.—ED.

In January, 1916, two eggs were laid, but the cold prevented them from being hatched; in March, however, a young bird was reared, and another in May.

In short, these pigeons have never ceased to nest for over a year, and I have at present five hybrids, three of which are adults. Each clutch has two eggs, but only one young one has hatched at a time.

The hybrids have the form and the carriage of *C. speciosa*, with the grey beak and legs of *C. maculosa*. In colour, they are intermediate with those of their parents; a uniform grey-brown, without a trace of the white spots on the wings of the mother; but the markings of the male bird—i.e. of the father—are represented by some speckled markings at the back of the neck, which however do not continue like his on the front of the neck and the breast.

These speckles are of a clear yellow on a deep grey.

The young birds are more handsome than the pure-bred *C. maculosa*, but are far from attaining to the beauty of *C. speciosa*. My intention is to mate one of these young female hybrids with its father next year, in order to obtain some birds which will more resemble the latter. I have every reason to believe that the hybrids will be prove fertile.

These pigeons are very hardy; they pass the winter in an open-air aviary, communicating with a compartment of the heated house, into which they can enter at will. They have never appeared to suffer from the cold. When it was freezing the parents brooded their eggs under a pent house in the outside aviary.

Their food is exclusively composed of wheat and millet.

One takes these birds to be *Chlorænas* (or *Columba*) *speciosa*, the "fair" pigeon (as it may be styled in English), which hails from Mexico and is found through Central America to Columbia, Guiana, Brazil, and Peru.

The first example exhibited in the London Zoological Gardens was in 1868, a second being added in 1871, and five others in 1876, etc.:—*Chlorænas* (or *Columba*) *maculosa*, the spot-winged pigeon, inhabits Paraguay, Argentine, and Patagonia.

In 1870, the first examples were exhibited at the London Zoological Gardens. A good many have been bred there.

The coo of this bird has a resemblance to that of the wood-pigeon in sound and delivery, but has only three notes, "cooo.....ko.....coo-ooo"

M. Delacour describes the spot-winged pigeon as having grey beak and legs, but *Columba maculosa*, although its beak is grey, has red feet; whilst *C. speciosa* has yellowish feet and bill.

Monsieur Delacour wrote these notes on the hybrid pigeons especially for our Magazine, and our grateful thanks are due to him, for he is serving his country on the battle-fields. EDITOR.

ON THE BREEDING OF THE EMPEROR GOOSE AT GOOILUST.

Philacte canagica

By F. E. BLAAUW.

Emperor geese had been one of my desiderata ever since I have kept waterfowl, and when some years ago the Zoological Society of London received the first pair ever imported alive I did not get green with envy but..... I thought that a great mistake had been made, of which I was the sufferer! This pair, however, proved to be very "disappointing" as Mr. Seth-Smith expressed it. The birds did not keep together and perhaps were not a true pair. No result of any kind was attained. After this importation, or perhaps at the same time, a pair came to the Berlin Zoological Gardens where it did not live long, and then six birds arrived at Woburn Abbey. Not long afterwards I at last received a pair myself and then through accident I may say I got two more pairs.

I had sent some rare waterfowl to an American fancier and this gentleman offered me two pairs of emperor geese in exchange. A welcome offer which I gladly accepted.

The first pair I got was of the London Zoo variety; they were "disappointing," they did not keep together, the *male* preferring Sandwich Island geese, no matter of which sex, to his lawful mate. On the arrival of the four new birds matters bettered for her and she soon paired with one of the males.

On the following spring (1914) this same female made a nest

under a bush rather far away from the water, and after having sat on the eggs during twenty-four days one gosling was hatched which was reared under a hen.

In the spring of last year (1915) this same pair laid again five eggs in a nest under a conifer far away from the water.

The nest was rather well constructed and after a while contained a lot of down. During the whole time of incubation the male was in constant attendance near the nest and made a lot of fuss if one came near. After twenty-four days of incubation five goslings were born, of which one however had a deformed leg so that it could not walk, and died after a few days.

The goslings in down are of a beautiful pearl-grey, darkest on the upperside, with black bill and legs. The eggs were white and mostly of an elongated shape. The goslings which I left with the parents grew very fast and in a few weeks were completely feathered.

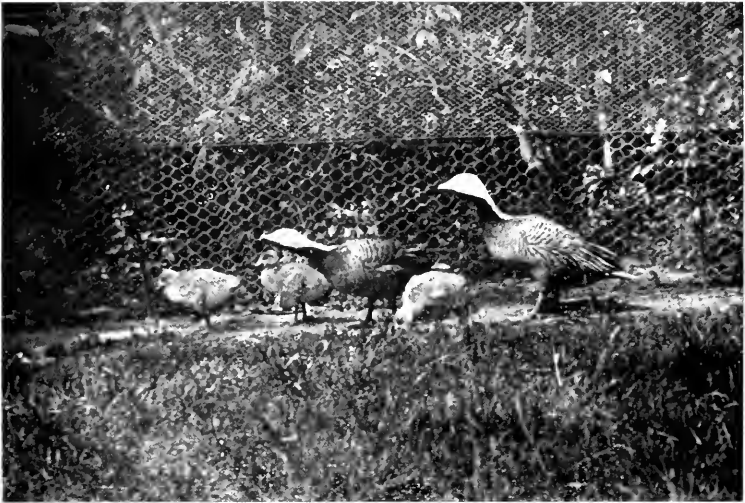
In their first feather dress they were grey all over with white tails. The grey was more yellowish than with adult birds. The feathers of the upperside were more pointed and the markings there and on the breast and sides were only faintly indicated. The legs were yellowish-black, and the bill also black, but with the pink shewing through. The heads were grey without white and they had no black throats. As soon as the birds were full grown they immediately began to moult, shedding all the feathers, except the large flight feathers, including the large tail feathers.

The legs also began to turn orange and the bill to turn pink and blue, and in autumn the birds had acquired the full dress of the adults.

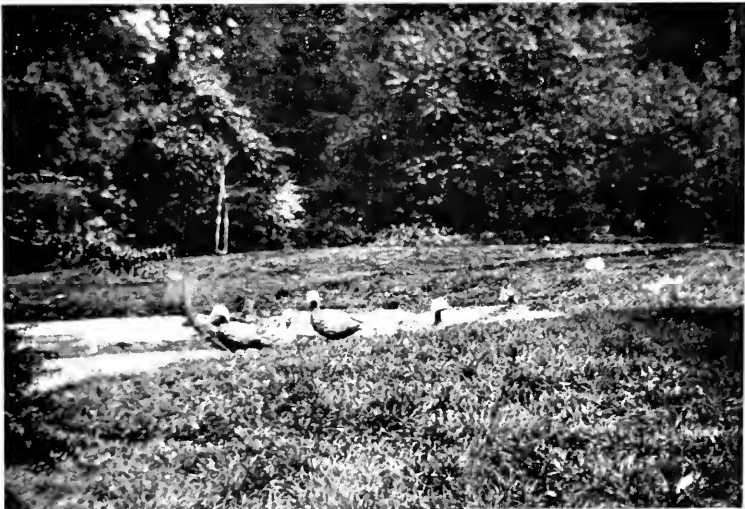
The emperor goose is a quiet tame bird, and is quite unaggressive to birds of its own species, or to other waterfowl. It cannot stand the heat very well and on hot days the young ones are apt to die suddenly. The old birds are also liable to sudden death so that their numbers have not much increased notwithstanding the breeding.

The emperor goose is really a most beautiful bird and the pure white head with black throat and delicate pink and blue coloured bill is very striking when seen at close quarters.

I daresay most of the readers of the *Avicultural Magazine*



EMPEROR GEESE, WITH THREE CHICKS IN DOWN.



EMPEROR GEESE. ADULT.

know that the home of *Philacte canagica* is the lands bordering the Beering Straits, and the extreme north of Alaska. It is said to migrate in winter as far south as Humboldt Bay in California.

* * *

It will be interesting to record here the hatching of two Andean goslings in the London Zoological Gardens after an incubation of thirty-two days. There were five eggs in all, two being clear. Mr. Seth-Smith wrote some notes on the subject in "The Field" (we wish he would sometimes contribute to the Magazine he once edited!). He stated that the down plumage of the Andean goose has not before been described. It is black and white, the colour being distributed in much the same way as in the young of the common shelduck.

EDITOR.

ON FIJI PARROT-FINCHES AND OTHER SOUTH SEA ISLAND MATTERS.

By AN AUSTRALIAN BIRD-LOVER.

Leaving for Europe in the middle of 1914 I promised myself the pleasure of having a talk with Dr. Bahr on Fiji parrot-finches, which he had studied during his stay in Fiji. Unfortunately, during my stay in London I could not spare the time, and my intended later visit was frustrated by this awful war. I intended to specially run over from the Continent to see Mr. Ezra's latest importations of King Birds of Paradise and other treasures. However, Dr. Bahr's articles in the "Avicultural Magazine" interested me so much that when I was in Fiji the following winter (June to Sept.) I took a great deal of interest in these birds, the coloured plate of which was published in the "Avicultural Magazine" at the time of Dr. Bahr's article. On my return I had some correspondence with Dr. Bahr as to the native name and other matters. Dr. Bahr told me the native name was Gigi, whereas the natives in the Ba district called them "Kula." I have since tried to get some information on the matter, but so far I have failed. Of course it may be, as I pointed out to Dr. Bahr, on account of the Fijian language being poor, especially as to colours; if I remember right they only have

names for a few colours, massing all others under one name, so that Gigi or Kula, which really only designate a colour, may be applied to many different birds, parrots or finches of the same colour. However, when I go to Fiji some other time I hope to settle that matter. Dr. Bahr also holds that the yellow-headed ones and the blue-black headed ones are only variations of the red-headed ones, a view from which I differ. The variations are so great that it seems to me hardly scientific to mass them with one class. Take the yellow-headed ones, for instance, of which I sent a skin to Mr. Seth-Smith. The other specimen being alive and well, has moulted out from a young bird with yellow bill and green plumage into a beautiful yellow-headed specimen, and not only the head yellow but also the vent feathers which, in the case of the blue-black headed ones, retain the red. The other kind, blue-black headed ones, sometimes almost sooty black, are more plentiful than the yellow-headed ones, and it also appears to me that hens of that kind predominate. In older males the colour is invariably blue-black, showing some undeveloped red quills which, mixed with the developed feathers, give the head almost a purplish appearance.

Dr. Bahr says that some of his older red-headed birds became orange-yellow, but I have not had that experience personally, though I have had dozens of old and young birds. I have however noticed in captivity that young birds with a blackish head moulted out red, the older, the breeding birds, always kept their original colour. The proportion is one yellow in about 100 red-headed, and one black-blue in 10 red-headed ones. They all fly together in flocks of from 6 to 2-3 hundred. They breed all the year round it seems, the breeding pair isolating themselves from the flock. The love or mating call is a shrill note emitted by the male when chasing the female. I know from personal observation in Fiji that these birds interbreed for I have watched them build their nests in the mango trees. Some of their offspring must retain the rarer colouring, otherwise they would not be there, and for this reason I think this kind should be a sub-section, the same as exists with the Gouldian finches.

In Northern Queensland I have seen the black and red-headed Gouldians feed their young in the nest, the cock with red head

and the hen black or *vice versâ*, some young bearing the colouration of the male, some that of the female, yet they are classed as separate species. The Fiji parrot finches, like those of New Caledonia and New Hebrides, are migratory. The blue-headed ones, for instance, come towards Vila in the New Hebrides during January to March when the tilling is being done; it is very hot then, the Fijians on the other hand visit the settlements in winter time, from June to September. They are terrors on the rice and not liked by the Indians for that reason. To see these pretty birds out in the open—some exquisitely coloured—gladdens the heart of any bird-lover, and I remember with pleasure even now the happy hours I spent watching them. To catch them is not a great art if you have a caller; to keep them is quite another matter. It is difficult to transport them as they are very pugnacious amongst themselves and prone to eye diseases, which renders them almost invariably blind once they are attacked, and if one bird in the cage has the disease the whole lot might just as well be liberated or they are surely doomed. Once they are acclimatised in an aviary they stand almost any weather conditions and breed very easily. A friend and I have bred them repeatedly.

Although I have kept this species off and on for many years I have not succeeded yet in finding out the way of telling the sexes for a certainty. I doubt if it will be many years before these lovely aviary birds are gone, even from their native home. Enormous numbers must perish during the hurricane season each year, and a far greater number are killed by the mongoose, introduced from India to destroy the rats. However they seem to have formed an alliance, for both thrive to an extent which is only comparable to the rabbit pest in Australia. A number of my call-birds were attacked and killed before I had time to come to the rescue.

One day, whilst out looking for birds, I watched a curious sight, which, if not belonging to the avicultural section, might yet be interesting to a number of readers. Seeing some coolies dig a trench through what seemed absolutely baked ground I noticed that after they had dug out about three feet the ground became muddy, and out of this mud they got eels and mud fish; unfortunately it only struck me later on that I ought to have seen whether the fish were

blind or not. Altogether one meets with some curious freaks of nature, as it were, in these islands.

However, to come back to birds. I had taken great pride in a small collection of honeysuckers which did well on Mr. Ezra's prescription for feeding them; they are very tiny with long slender bills, a sort of sooty black colour with a scarlet crown or a red patch on the throat. Alack and alas! they were killed, after having got them as far as Sydney, through the man dropping the box. I noticed also a most beautiful flycatcher, rufous breast and blue back, head and tail.

I tried hard to catch a pair of masked wood swallows, but whilst being plentiful enough, they seemed to fly very high, and with insect life teeming and no birds to reduce the pest, of course they never attempted to come to a bait, however nicely dished up to them. I am very fond of these birds and when going over again, providing the war has not ruined me altogether, I shall take an Australian wood swallow with me to try my luck that way.

It is remarkable how few birds there are in the Island, almost no soft-billed birds at all, though I was told that up in the mountains there are some lovely species, one of them being, or supposed to be, a parrot-finch, yellow with red head. I have my doubts, but if all goes well I shall try and go up as soon as I get the chance.

It is strange that these South Sea Islands, with all their beauty in plant life, are so barren in birds. Reading of Tahity, for instance, as the Pearl of the South Seas, one would expect to find there also some fine birds. Dreams of humming birds, etc. float through one's mind and that sort of thing and yet there is absolutely nothing there that could be useful as an aviary bird. A friend was telling me of two species of beautiful birds that were supposed to inhabit the Island and I had visions of a new species of parrot-finch at least, yet picture my disgust when, motoring right out to locate some, I struck, not a beautiful parrot-finch, but a flock of hundreds of redheads which I can trap in my paddock near Sydney. The other species turned out to be a chestnut finch, also from Australia. It seems that these finches were introduced from Australia and have increased in great numbers and that is all that is there. In Paratonga, Tanga, Samoa, etc. you find just as little,

and I would not advise anyone to go on quest of something rare or beautiful to any of these Islands, for only disappointment will be the result; there are no aviary birds of any kind except in the Fijis. I remember having been in the Loyalty group nearly 30 years ago and I cannot of course remember what birds I saw then, but a friend tells me that another kind of parrot-finch exists there and he promised to try and get me some skins. The way things are at present I might have to wait for ever, my friend having gone to the war.

THE BIO-CLUB.

[A NEW FRENCH ASSOCIATION FOR LOVERS OF NATURE].

The Editor has received a letter from the Comte de Ségur from Paris, asking him to make known to aviculturists and all lovers of birds the existence of the Bio-Club.

He writes :—"A group of French amateurs who are in touch with the government and acting in accordance with its expressed desire, have asked me to join them in a concern formed by themselves *just* before the war, and called the Bio-Club, the aim of which is to assist each other in the formation and development of their collections of living creatures, and also of rare plants, etc."

"With the help, financial and otherwise, of the French government, we shall be enabled, as soon as the war is over and vessels can once more travel in safety, to import rare birds and plants from the French colonies, many of which are as yet unknown in our collections."

"The intention of the Club is to distribute birds amongst those amateurs who possess the most prosperous and best set-up aviaries, conservatories, private Zoos, and so forth, *entirely free of charge*. All that the Bio-Club asks in return for such gifts is that amateurs should keep the Society informed as correctly and minutely as is possible, of the results obtained, reproduction achieved (if any), and in general of any observations of their own upon the creatures, etc., received from the Club. Occasionally arrangements would be made for duplicates to be exchanged

“between members. Now lately it has struck members, headed by
 “the President of the Club (M. Guist'hau) that even more than
 “this could be done, and that such gifts and exchanges need not be
 “limited to French subjects, but that on the contrary, the Club
 “would be greatly benefitted if the opportunities it offers were ex-
 “tended to other amateurs of good name and report, belonging, of
 “course, *only to countries allied with France*. My object in writing
 “is to put this before you, as one of the most qualified of English
 “avicultural amateurs, and to ask you, in the event of the whole
 “idea appealing to you, if you will make it known to any other
 “compatriots of yours who are interested in birds, plants, or
 “mammals.”

“By joining the Bio-Club, the English, etc., will be acting
 “patriotically—speaking from a French point of view—and will
 “help to destroy the monopoly, which German firms have so far
 “almost entirely exercised, of importing foreign animals and birds.”

Only those who are *invited* by the Council of the Bio-Club, will become members, if they wish to do so.

The intention of the Bio-Club is to gather together all those who are interested in Nature, not so much from a ‘scientific’ point of view, as of one of utility and interest in all that pertains to the study of animals, birds, plants, and so on. All will be included. Collectors of living creatures, biologists, travellers, artists, who are inspired by Nature, as well as those who occupy themselves in cultural, æsthetic, and industrial pursuits in connection with living Nature. Amongst other things it is suggested that meetings should take place for the exchange of ideas amongst members, for the study of all useful questions, for the presentation of specimens and collections.

* * * *

It will be seen that the Comte de Ségur, who is a member of the Avicultural Society, is one of the original members of the Bio-Club, which includes names of distinguished Frenchmen.

* * * *

THE BIO-CLUB.

Président :

M. GUIST'HAU, ancien Ministre de l'Instruction Publique et du commerce.

Vice-Présidents :

- M. le Professeur HENNEGUY, du Collège de France, Membre l'Académie des Sciences.
M. le Comte Nicolas POTOCKI.

Premiers fondateurs :

- S. A. R. Monseigneur le Duc de MONTPENSIER.
M. le Comte CLARY, Président du St. Hubert Club.
M. le Docteur J. HARMAND, Ambassadeur honoraire.
M. le Docteur KERMORGANT, Inspecteur Général du Service de Santé des Colonies, Membre de l'Académie de Médecine.
M. le MYRE de VILERS, Ambassadeur, Président honoraire de la Sté d'Acclimatation et de la Sté de Géographie.
Mgr. le ROY, Supérieur Général des Missions.
M. RONDET-SAINT, Secrétaire Général de la Ligue Coloniale et de la Ligue Maritime françaises.
M. le Professeur ROSENSTHIEL, du Conservatoire national des Arts-et-Métiers.
M. le Docteur Baron Henri de ROTHSCHILD.
M. H. SAGNIER, Secrétaire perpétuel de l'Académie d'Agriculture.
M. le Comte G. de SÉGUR.

REPORT ON THE COUNCIL AND GENERAL SUMMER MEETING.

The annual summer meeting was held by kind permission of the Zoological Society on June 22nd. The Council met previously in the Council Chamber, afterwards joining the other members at tea in the Fellows' enclosure, when a most enjoyable hour or two were spent. We were glad to welcome not only many of our older members but also our newest member, Lady Samuelson, who bids fair to rival the keenest on our list. We were also glad to see the Editor of our contemporary journal "Bird Notes." After tea, our members resolved themselves into small parties and visited the Small Bird House, Western Aviary and Parrot House. The most conspicuous bird seen was Wilson's Bird of Paradise, looking quite artificial in its gorgeous apparel. One, of course, missed many birds seen before and wished the birds could be spared longer, but when

it is considered that the places are practically speaking never empty it is a wonder that they live at all. The extremely rare Gardener Bower-bird, presented by our Editor, is alas! dead; a bird which some aviculturists considered to be the 'bonne bouche' of the collection. The small Bird House must be a perfect sick bay and one trembles to think what a culture of the dust there would *not* reveal. But the birds are kept beautifully clean and certainly do not lack attention. It is customary to run the Zoo. down, but it is doubtful if any of us would succeed better under the circumstances, except perhaps in the matter of food for the foreign softbill birds. Such were the thoughts of members who strolled round the aviaries, of which the summer aviaries were much admired and approved of. One event of interest was the hatching of two Andean geese. They were quaint little creatures and quite captivated the hearts of us all. Mr. Seth-Smith who, we are sorry to say never writes for us now, told several amusing and interesting anecdotes, one which related to the stealing of a broody hen and several sheldrake ducklings in broad daylight and to get which the thief must have climbed the fence and returned the same way. He made off with his booty and no trace of either hen or ducklings was ever seen again. A member inquired if the lions and tigers were quite safe. He was assured they were. A visit to the pheasants showed them to be as dull and lethargic as usual. The birds of prey looked reconciled, and the owls taken aback at our insolent gaze. One wonders what the authorities would do were it not for the generosity of our member Mr. Ezra. He evidently finds it far more blessed to give than to receive. The afternoon thus passed off all too quickly (as all pleasant afternoons do!) and by 6.30 most of us had reluctantly decided that all good things must end some time. About thirty members were present which, considering the times, was quite encouraging.

At the Council meeting matters of considerable importance were discussed. The election of officers resulted in the choice of Mr. St. Quintin and Mr. Shore Baily, together with Miss Chawner on the Council in the places of Mr. Arthur Denman (the retiring member), Mr. B. C. Thomasset (who acts as Treasurer), and Dr. L. Lovell-Keays (Acting Secretary). It was announced that our late

Hon. Business Secretary (Mr. Newman) was shortly expected home again, and he was elected auditor, members remarking on the very valuable services he had rendered to the Society. Mr. Denman, in accordance with the usual custom, was elected Scrutineer.

The question of "medals" was then brought up and it was at once conceded that the present arrangements are unsatisfactory. It is pleasing to report that such steps are being taken as will ensure members getting their medals within *reasonable* time in the future, so that the Society hopes members will send in their accounts of successful breeding results, so as to keep the Magazine as up-to-date as possible. The Editor remarked on the absence of copy, and this is a subject which should interest every member since it is vital to the welfare of the Society. It surely should not be beyond the capabilities of the average member to write a short account of his or her birds occasionally and thus make the Magazine as variable as possible. At any rate the attention of members is drawn to this serious side of the Society's welfare.

The Treasurer then made some remarks on the financial aspect of the Society's affairs and they appeared to be somewhat consonant with the Editor's. The Society, owing to the war and other reasons, appears to be in a somewhat transitional stage, and it only rests with the members for it to emerge a glorified imago. But no journal can be carried on without money and members are begged to send in their subscriptions (if still unpaid), together with any donations they may care to give, to the Publishers at once. With many the non-payment of their subscriptions is entirely due to forgetfulness, but they little know how much trouble their forgetfulness may cause. Our Treasurer is very busy with Tribunal work and I am sure all loyal members of the Society will save him all the trouble they can by *at once* sending their subscriptions to the Publishers: Messrs. Adlard and Son and West Newman, Bartholomew Close, E.C. If they will do so they will, by helping our Treasurer, indirectly, be "doing their bit" in a truly patriotic way.

These were the chief things discussed at the Council Meeting and it is due to our members that they should know and realise what useful and essential work the Council is doing.

This, my second Secretarial notice, is no doubt rather unusual

in character, but I trust members will read it notwithstanding. The Secretarial duties are not quite such a sinecure as at first supposed, but I must pay a tribute of grateful recognition to Mr. Seth-Smith and Mr. Pocock for the great trouble they took and the help they afforded at the meeting in the absence of our regular Business Secretary, Mr. Newman.

L. LOVELL-KEAYS,

Hon. Business Secretary.

OBITUARY.

It is with the greatest regret that we record the death of Lt.-Col. BOYD R. HORSBRUGH, A.S.C. A member of the Society since January, 1898, he was always keenly interested in its welfare and progress, from time to time contributing interesting articles to the Magazine. All species of birds attracted him, and he had imported some very fine collections, notably from India, in which were included many sunbirds, minivets, and other rarities, such as the blue and white flycatcher, red-headed tit, and many that were seen alive for the first time in England, and even in Europe. I had the pleasure of accompanying him to Genoa to meet the ship, which put into port for a few hours on her way to England, and of acting for him as interpreter in the confusion and difficulties of obtaining from the Italian officials the due permission to land and take by rail some of the most precious amongst the birds, which Colonel HORSBRUGH took home.

Colonel HORSBRUGH had, as soon as the war broke out, as an officer of much experience, set to work to help his country and the cause of the Allies, with that vigour and thoroughness which characterized whatever he undertook, although illness retarded much of the forcefulness of his aid, which his spirit would have otherwise carried through. He was in action at the battle of Loos, etc. A thorough type of an outspoken Englishman with a most kindly heart, he will be missed by the Avicultural Society as an old and valued member and a very keen lover of birds. H. D. A.

THE HERMIT THRUSH.

By WINIFRED HOLWAY PALMER.

[*From Bird-Lore.*]

I stood to-night, at twilight's holy hour,
And heard the thrushes sing!
As from some far, secluded convent tower
The Angelus might ring.

Dropping its silver tones, like summer rain,
Those thirsty souls to bless
Whose lives are spent in endless toil and pain,
Or illness and distress.

So falls the song! Each liquid cadence rare
In time and rhythm true!
Cool, tranquil, calm; unhurried as a prayer,
And crystal clear as dew!

Deep, deep! Sounding the very depths of life
In reverential mood;
Then higher rising, throbs with meaning rife,
Far through the dark'ning wood!

Higher and yet again, the strain is heard,
Until the heart is thrilled
With mysteries unsolved, and hopes deferred,
And longings unfulfilled!

Now that deep, opening strain is heard once more,
Bringing its blessed peace!
The sunset light is fading; day is o'er,
And soon the song will cease!

Yet in my heart, those tones so wondrous sweet,—
That song of beauty rare,—
The night shall echo; and my dreams repeat
That softly uttered prayer!

MONTHLY NOTES FOR AUGUST.

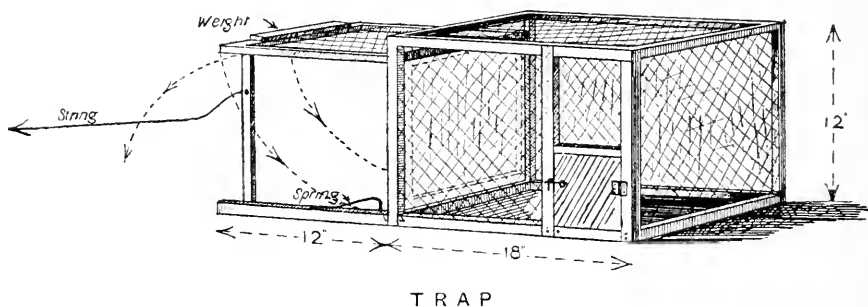
By SECRETARIUS.

The season so far as it has been pleased to reveal itself to us has been, to most of us I fear, somewhat of a disappointment with the persistent rains, the extraordinary cold nights and sunless days our birds have felt small desire to go to nest and when, in spite of all these drawbacks, they have done so, the results have almost invariably ended in shattered hopes. Breeding medals will not be in great request this year, that is certain. Miss Chawner, the successful breeder of owls, has nearly scored a success with the yellow-winged sugar-bird, but in breeding softbills it is the last fence that so often brings you down, and with Miss Chawner it seems that even the last fence was cleared, but she could not steady herself for the run in and so she has to begin all over again. There are still many species that have not yet been bred, such as the violet-eared waxbill, the black-cheeked waxbill, the bar-breasted firefinch, all of which are frequently seen in the market. Then there are hosts of parrakeets of which very few, with the exception of the great class of broadtails, have yet been bred. The parrakeets are *not* difficult to breed. Mr. Shore Baily, our new member of the Council, has bred quite a good number, of which some at least have been for the first time. To those who want to try and win a medal the conures (*Conurinae*) offer the best chances. They are hardy, easy to cater for and go to nest with comparative frequency. But in keeping parrakeets, beware of tragedies. Even the inoffensive cockateel has lately been accused of viciousness (*vide* "Cage Birds" for July 1st). Personally, I would not trust any parrakeet of any sort or any size. There is an old fable that practically speaking it is near relations that cause most bother. However true that may be of divine humans there is very little truth in it where parrakeets are concerned. You may keep a flock of parrakeets for years without mishap when, without any warning, you will one morning go into the aviary and be confronted with some ghastly tragedy. With small birds it is *largely* a matter of colour, unless you are foolhardy enough to turn a hangnest or jay into your general aviary, *i.e.*, introduce accredited murderers. Remember all birds *hate* black birds

and such must be introduced into your aviary with the same timidity as a new boy in a school. But apart from black birds many a valuable or valued (which may be quite a different thing) bird has been slain because a jealous bird has fancied he saw a dangerous rival in another of rather similar colouring. For instance, a green cardinal took a violent dislike to three half-masked weavers, and within two hours of their being introduced in a very large thickly-grown aviary had killed the lot. Another time a zosterops took a dislike to a hen violet tanager and very soon her number was up. It is not by any means a question of size; and size is often no protection. Many birds are terrible cowards and, still worse, bullies. However, an instance occurred not long since in which a golden-crested wren stood up to a reed warbler and actually closed with its antagonist without being badly hurt. The angelic little long-tailed tit is one of our most courageous of birds, and stands no nonsense. It follows that, if birds of similar colour won't agree in the resting period, *a fortiori* they will not agree in the breeding season. Don't wait till there is a tragedy, but catch one or other of the birds up and separate them. Catching up is not such an easy thing as it sounds. The old or rather most usually employed and advocated method is, I fear, to use the butterfly net. It has one great advantage, *i.e.* from the bird dealers' point of view, *viz.*, that it is the worst. There are several better methods. For instance, there is the "flue net" a very fine net made with black cotton. With this the bigger the bird the easier it is to catch them. They are driven into it and get entangled. This is the system by which migratory birds are chiefly caught. Another plan is to watch where the birds roost and then catch them with the aid of an electric torch. They get dazzled and are easily taken. Another excellent device is the common or garden spring bird trap, where the bird alights on a platform and the lid is thereby released. Aviaries, if properly constructed, should be so devised as to render catching easy. The method I use myself is very simple in practice and does not involve chasing the bird round the flight with a net. I have no objection to a net just for clapping over the bird in a confined space, say 8 feet by 3. What one does object to is using a butterfly net, as a butterfly net, *i.e.* chasing ones

quarry till it is tired (or you are, whichever happens first) and making frantic dives and flourishes at the bird as it passes or settles.

Another simple method is the old-fashioned sieve and string, but there are, at least, two objections to it: one is the sieve sometimes falls on the bird and kills it, and the other is that it is a case of "first catch your bird and then *get* it." A very simple and inexpensive contrivance consists of a hollow cube covered with wire work, one side of which is a swinging door. An illustration of this trap is given:—



The main entrance is hinged at the top as shewn. When it is wished to use it, one puts the food on the floor of the cage, opens the swing door, which by means of the post keeps it so. To the post is tied a piece of long string which the catcher holds in hiding. Food is withheld, except in the trap. The bird goes in. The string pulled, the door closes with a snap and you have the bird, which is removed through a small door at one end. Mine cost 2/9 without the wire netting, and by means of it hundreds of birds have been caught without a mishap. It must be fairly large so as not to suggest a trap, and it is a good plan to use it as a feeding place for some days before one wishes to catch a given bird. It is well to place the food as far away from the swinging door as possible.

Captain Reeves has also invented a combined hopper and bird trap, which is very ingenious, but as under the writer's use a hen violet-eared waxbill was killed, its use as a trap has been discontinued. It is also very cumbersome and somewhat costly. Enough then has been said in catching birds, and the necessity for

catching them should trouble seem to threaten. The maxim should, and must be "Don't wait until the danger materialises!" People are by nature unorthodox, but because "Mr. Brown" keeps a reputed bully with his small birds, and tells you he does so with impunity, don't copy his example even if he claims innumerable breeding successes, and that he never has tragedies. The evil that men do lives after them, whereas the man himself is apt to forget it even before the happy moment that his spirit quits its abode of clay. Nothing succeeds like success, and nothing rushes into print half as quickly. The failures have to be dragged out of a man willy-nilly before they can be made to face the footlights of public criticism. The worst fate that can happen to an aviculturist is so to live up to a reputation. It generally ends in his losing what little he had. All of which means beware of the man with a reputation for daring unorthodoxy, and who paints all his birds as if they were angels on a Christmas card. The truth is that all nature is cruel and ferocious and your friend sees things through rose-coloured glasses. In fact, the wish becomes the father to the thought. Finally, remember it may be too late to mend, or later you may find it is never too late to pick up corpses.

CORRESPONDENCE, NOTES, ETC

MURDEROUS TENDENCIES IN BIRDS.

Speaking of wagtails in his article on British softbills (p. 225) Dr. Lovell-Keays says:—"I am rather sceptical about their murderous tendencies" and of blue-tits he observes:—"As to their being murderous I simply don't believe it." Now I do not for a moment suppose that our friend wishes to suggest that my assertions to the contrary are wilful mistatements: he simply fails to understand how it was that his birds, lodged in an aviary seventy feet in length, should have exhibited no Hunnish tendencies, whereas my examples of the same species in a sixteen-foot aviary behaved abominably.

To me there is nothing surprising in these facts: under different conditions birds of the same species often show different sides of their character, and even under identical conditions individuals of a species often behave as diversely as members of the human family. Undoubtedly in a large aviary, and particularly when planted with shrubs and creepers, birds are less inclined to dispute and can more easily avoid each other than in a smaller enclosure.

Wagtails have always been my favourite British softbills, and in my time I have kept a fair number of the pied, grey and yellow species; but like their cousins the pipits, they are combative birds, and doubtless, like other birds they are selfish; it is therefore not to be wondered at, if a smaller and weaker bird should attempt to annex some coveted morsel of food, that they should resent and strive to avenge such infringement of their fancied rights.

The murderous tendencies of the ox-eyed tit are universally recognised: it is therefore not at all remarkable that, under certain conditions the blue-tit in like manner shows cannibalistic tendencies; and, to my great disgust (for I greatly delighted in my tame little blue-tits) I had ample and repeated evidence of the fact, as recorded in "British birds with their nests and eggs," Vol. 1, p. 161.

A. G. BUTLER.

In a very roomy aviary in my former garden in Italy, a male pied wagtail murdered several small birds, persistently driving them to their deaths, apparently out of sheer devilry.

EDITOR.

'BRANDLINGS' (WORMS) AS FOOD FOR BIRDS.

To the Editor of the Avicultural Magazine.

DEAR SIR,—It seems I have started another hare, only this time it is a worm. I am not an authority on *anything*, especially am I not on things without a backbone—invertebrates I think they are called.

The worm I mean may not be a "brandling," but it is rather small, is more red than most, has yellow rings, and a yellow part at the tail end. It is found in manure heaps. Some grey-winged ouzels that I am taking care of eat them, feed their young, and rear them on these worms. Curiously enough Mr. Page in his "Aviaries and Aviary Life" mentions what is evidently the same class of worm on page 112, when he succeeded in rearing ouzels for the first time, a fact I have discovered only since writing the original note. Can it be that "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy."

I have the honour to remain, yours obediently.

SECRETARIUS.

A COINCIDENCE.

Two years ago when I came into this part of Salop none of my neighbours seemed to have budgerigars, but mine bred very freely and one or two young birds escaped and were not caught again. Some weeks afterwards I was walking on some cliffs about half-a-mile away when my friend asked what those funny looking woolly things were, and I said they were the casts from some bird of prey and that if he opened one he would find the bones of the animal inside.

The casts were coated apparently with moles' fur. He opened one or two and I think it was the second that contained the skull of my (?) little budgerigar.

There must have been at least a hundred casts I should think and the skull puzzled me very much for some time until I remembered my little bird's escape, as all the feathers had disappeared and there seemed to be no trace of any kind of feather in the coating of the cast.

Siskins during the winter at different times, two sparrows and a chaffinch got into the aviary and though I turned them out fairly soon I saw them all dead within a few days. I do not know what killed them, not cats or the sparrows, as they were not mauled and they looked very well when liberated. A cat did get the chaffinch I think.

Hawkstone, Salop.

ALFRED A. THOM.

THE UTILITY OF OWLS.

Taken out of a Barn owl's tree at Keswick, in Norfolk (April 10th, 1911): 114 "pellets" containing the skulls of:—19 very small rats, 126 long- and short-tailed field-mice, 69 shrew mice, 3 small birds (perhaps greenfinches) No game.

SIR,—Do you think it would interest any of the members of the Avicultural Society to hear that a Lesser spotted woodpecker was seen here early in May? Possibly it may be unusual for such a rare bird to be seen so near London. It is the first time I have had the good fortune to see this bird at liberty, and it was interesting to notice that its plumage looked much more brilliant against the green leaves than in a show cage. Fortunately it came on to an exposed branch, along which it ran, giving a good opportunity of seeing it plainly. There seems good reasons to hope that it escaped being shot.

31 Church Crescent,

E. BRAMPTON.

Church End, Finchley.

EXTRAORDINARY SITE OF A YELLOW-HAMMER'S NEST.

Captain Sir RICHARD SUTTON writes to the Editor from the front in France: "You will hardly believe it, but a yellow-hammer nested and reared its brood between the sandbags of the emplacement of one of our big guns. No matter how much the gun was fired, the bird never moved, although only 6 feet from the muzzle.

The noise of course is terrific, and the concussion has broken all the glass in the windows of a cottage close by. No one who had not seen, would believe such a thing to be possible; it might interest the readers of the "Avicultural Magazine."

ERRATA.—"House" should read "horse," p. 258, last line but one. Monthly notes for July, by Secretarius.

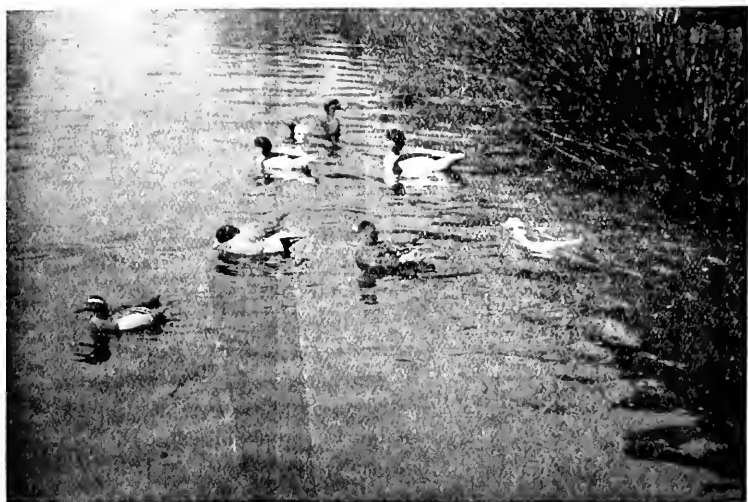


Photo by Oxley Grabham.



RUFIOUS TINAMOU AND BROOD.

Photo. by D. Seth Smith.

Adlard & West Newman.

AVICULTURAL MAGAZINE,

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NESTING NOTES FROM THE
ZOOLOGICAL GARDENS.

By DAVID SETH-SMITH, F.Z.S.

(Curator of Birds.),

The nesting season at the Zoological Gardens has not been crowned with any great success. The weather has, to say the least of it, been trying, and in a public Zoological Garden, one finds that it is not possible to succeed in breeding birds to anything like the same extent one did when one kept the same species privately in quiet aviaries. Very few birds have been imported for many months past, and although the bird population at the Gardens is fairly large, there is a considerable lack of good breeding pairs.

Amongst the larger birds we hoped to breed Emus this year, but our pair has quite disappointed us. Last year the hen was away on loan to a member of this Society who happened to have an odd male. She laid about twenty eggs, some of which hatched successfully. This year she has been running with a male in one of the Park Paddocks, but all she did was to drop two eggs in the early part of the year. I am inclined to think that these birds do not breed regularly every year, but sometimes rest for a season.

The Rheas have done better, but not so well as they did last year when nine chicks were successfully reared. This year we have five very promising youngsters. The hen commenced to lay in May, and we took the eggs as they were laid, substituting dummy eggs made of cement and painted yellow. The cock-bird became broody when four or five eggs had been laid, but we waited until there were eight before placing them in the nest and removing the dummies,

which was done on the 24th of May. On July 2nd one chick was seen running about in the paddock while the sitting Rhea remained on the nest. The chick was removed to a warm foster-mother until two days later when the cock-bird left the nest with four others. I then examined the nest and found twelve more eggs, showing that the hen must have continued to lay for some time after the cock commenced to incubate.* Some of these eggs appeared good, but although they were placed in an incubator no more hatched. Last year the brood was increased by four or five, hatched in the incubator after they had been left in the nest when the parent went off with the first hatched chicks.

Tinamous are birds that breed freely as a rule, but the sexes, in most species are exactly alike and it is only by chance that correct pairs are secured. A pair of Rufous Tinamous have done well in the Summer Aviary. The first clutch of eggs was taken and incubate by a domestic hen which hatched eight out of nine eggs. Shortly after these eggs were removed the hen commenced to lay a second clutch in the same nest which was situated in a clump of iris. When eight eggs had been laid the cock took charge and commenced incubation, the hen taking no further interest in the matter. On the twenty-first day he hatched off eight chicks, all of which have done well. They are extremely pretty when first hatched, clothed in hair-like down and having much the appearance of tiny hedgehogs. They are most independent after the first day or two, wandering far away from their parent and searching for food on their own account. In this Summer Aviary, which would be an ideal breeding enclosure if it had a good shelter, breeding results have been most disappointing this year. Brush bronze-wing Pigeons which as a rule are good breeders have had several nests, but in every case failed to hatch, although the eggs have contained young. White-throated Ground-Thrushes have nested twice, but on each occasion the young have disappeared directly they were hatched, presumably eaten by their parents, as there is nothing else in the same compartment that could hurt them. Scarlet Tanagers are unsatisfactory for the reason that the young insist on leaving the nest when in a very unfledged condition. This would be all right in the hot forests of Brazil, but here the nights

It is best to have two or three males as incubators.—ED.



MALE SOUTH AMERICAN RHEA AND BROOD.

Photo. by D. Seth-Smith.

Adlard & West Newman

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are too cold and they succumb. This happened last year and again this year with the first brood. There is now a second brood of two, and if the weather should continue to be hot we may perhaps have better success. A few young *Diuca* finches have been reared, and in one compartment is a brood of twelve Common partridges, hatched by a silkie hen from eggs sent to us. These are now independent of their foster parent.

In the Southern Aviary which is given up to gulls and other such robbers, the Great Black-backed gulls have bred well, seven young birds being reared by four pairs. Each pair keeps to its own territory and a battle royal takes place if there is any trespassing. Should a young chick have the misfortune to cross the boundary it is most likely to be swallowed whole.

The White Storks generally breed here and this year have successfully reared one young bird, now nearly as large as its parents.

We had great hopes at one time of breeding from the fine pair of James' Manucode (*Phonygama keraudreni*) which occupies a compartment of the outdoor cages of the Small Bird House. A nest was built amongst some thick branches fastened up at the back of the shelter shed. In the wild state climbing tendrils are employed but we found the best substitute to be pieces of an old rush mat. The hen commenced to sit, and continued to sit, and as week succeeded week our expectations of young birds—the first nestling Paradise birds ever seen in Europe—produced the greatest excitement. But alas, one day when both birds were outside, the keeper procured a ladder and investigated, with the result that an empty nest was discovered! The bird continued to sit in it for some time after this, and then laid an egg, which was discovered only a few days ago, and may yet produce a young Manucode if it does not disappear in the same way as those which the behaviour of the hen-bird led us to suppose were there before.*

We find it is best to collect all the eggs laid in the Waterfowl enclosures and to incubate them under hens, as in a mixed collection

* On August 12th, the hen bird was seen to leave the nest with a newly-hatched nestling in her mouth, to fly with it to the outer compartment where the cock bird seized and swallowed it.—D. S.-S.

young ducks do not stand a chance. So we look for eggs on the islands about every fortnight. During one search we discovered a nest containing five large eggs which we knew must belong to a pair of the beautiful and rare Andean geese which share the Western Duck enclosure with numerous smaller companions. These eggs were placed under a hen which succeeded in hatching two, one other containing a dead chick and the remaining two being clear. The nestling is white with a black stripe from the top of the head to the tail, crossed by another passing down the wings, black patches on the thighs and small black spots on the ear-coverts.

The two goslings have grown well, but one has been rather a weakling from the first.

A fair number of young ducks such as Carolina, Spotbill and Andaman Teal have been reared, and we have some nice young Burmese peafowl, North American wild Turkeys and Lineated Kaleege Pheasants.

THE BLACK REDSTART AND ITS BREEDING HAUNTS.

Phœnicurus titys.

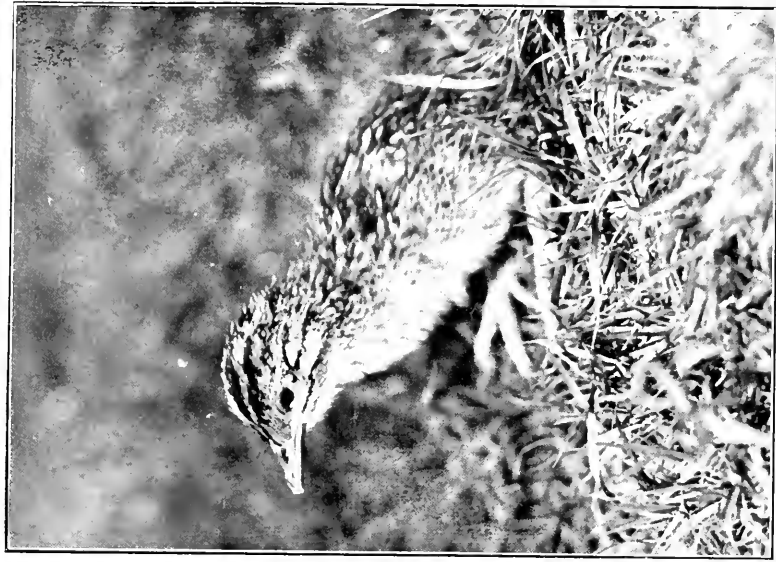
By HUBERT D. ASTLEY.

It is a good many years since I found a nest of the Black Redstart, but I remember the details of the event as if it were yesterday.

This charming little bird, which is an autumnal and winter visitor to England, is easily distinguished from the better known redstart, which arrives for the summer in April, by having the crown and rump dark bluish slate-grey, the rest of the upper parts, and the sides of the head and under parts, deep velvet black, the abdomen and hinder flanks however are slate-grey, and the under tail coverts pale rust-red. The tail and upper tail-coverts are a rich chestnut-red, except for the two middle feathers which are black, but when flying the chestnut-red colour of the tail is very conspicuous. Hence its name, the Black Redstart, to distinguish it from the other one. If we consult The Century Dictionary and



ANDEAN GOSLING.



CHICK OF THE RUFOUS TINAMOU.



look up the word 'start,' we find amongst other meanings the following:—"Old English : start, stirt, stert, steort" = a tail. Some "derive it from the root 'start' in the sense 'project.' A tail; the "tail of an animal; thus 'redstart' is literally 'redtail.'"

Consequently readers will at once understand that one cannot speak of or write about a "Blackstart," since that would mean a "blacktail," which is just exactly what this bird does not go in for. If we talk of having in our possession some Redstarts and some Blackstarts, we are merely saying that we have 'redtails' and 'blacktails.' When it is quite as easy to be correct as the contrary, we will choose the former.

If we are anxious to win prizes at a bird show, we quite realize that we must be correct in all our dealings, and we strive to send our birds in such a condition as will we hope catch the eye of the judge and, as a sequence, a card into the bargain. Therefore we are very particular as to details. The cage, the food, the beauty of the bird to be exhibited, and so on; conforming strictly to certain rules and customs, without which carefulness we foresee disappointment and invite a failure.

So too with birds' names. Let us be correct over them, or we shall find ourselves in danger of appearing not to know their meanings. And so in all books upon birds, which are called standard books, books that is to say which are written by those *who know what they are writing about*, one finds, to take this instance of the black redstart, that it is always so called: not, mind you, only in the English language, but, in others. In French it is 'rouge-queue noir, that is, black red-tail; in Italian, 'codirosso spazzacamino,' which is, being interpreted, "the red-tail that roams along the way," meaning, I suppose, that it flits about the paths and hill roads, as one travels along them. The Spaniards likewise name it colirojo (Red tail). The Italians call the Rock Thrush 'codirossone,' which means the 'big redtail,' and this bird not only has the same chestnut-red but moves the tail in the same way. And in German, the black redstart is Haus-Rotschwanz, which means the House red-tail, and if you had ever spoken to a German [no one *wants* to now!] of a haus-schwarzschwanz, which would mean a house black-tail (or blackstart) he would not know what bird you referred to.

And it is called the House red tail (or redstart) because in mountainous and hilly districts, this bird often perches on the roof tops.

So now, being quite clear as to the meaning of the word 'start,' as used in connection with redstarts, let me try to describe how I found a nest of young black redstarts.

I was at Brieg, one of the most picturesque towns in Switzerland, in the Valais Canton, my principal object being to visit the great and famous Aletsch glacier in the mountains above. I started on a glorious day in mid-June, rejoicing as, on reaching higher altitudes, the air became more and more exhilarating, with that sparkle in it which one only experiences in the mountains. It was a long mule ride to the hotel situated close to the glacier, a hotel which in those days was a very simple affair, clean but sparsely furnished, and very different to the palatial edifices to be found in Switzerland nowadays, with French cooks, string bands, etc., and to my mind decidedly preferable.

The day after my arrival, and the day after that, it simply poured unceasingly, whilst the mist was up to the windows, but on the third day I awoke to find everything sparkling in brilliant sunshine, and out I rushed! The glacier excited and thrilled me, looking like a big frozen river, the ice massed in huge boulders with crevices showing colours of delicate blues and gorgeous greens, into which if you slipped you would probably say good-bye and proceed to admire the beauties of another plane in another life!

It was all very wonderful, but looking back, I know that as I walked in the afternoon up a mountain path strewn with great boulders, one of which, hurtling down from above, all but sent me into the next life, I was still more thrilled at seeing some small dark coloured birds with chestnut-red tails flitting in front of me.

Black redstarts! I had never up till then seen one alive, but there was no mistaking the species. These birds that inhabit spots at high altitudes have a great charm about them. The solitude, the beauty of the surroundings, their voices tinkling in the stillness of the crystal air, all go towards impressing on one their fascination.

There was more than one pair, I certainly saw three, and I sat down to watch them. One pair was especially restless, flitting from boulder to boulder and calling ceaselessly. So I, concealing

myself amongst the rocks, proceeded to watch. Once the male flew on a stone close to me, flickering his chestnut-red tail, and in his bill were insects. He sat for a few minutes and I lay hardly breathing, and then he disappeared. At once, drawing myself up, I looked over the edge of the rock, my field-glasses ready should I make out his whereabouts.

There he was not very far off, becoming visible as he moved from boulder to boulder. Then I fixed him with the glasses, so that I could see every feather. Up the slope of the mountain he went, cautiously yet surely, and then suddenly after sitting upon a stone for a minute or two, he popped down behind it and disappeared! Ah! but there he was again, and off.

What excited me was that whereas he had gone from sight with his beak full of insects, he reappeared without them. So then I knew that if only I could keep my eye upon that stone, I should find the nest, but the stone in question was some way off and I felt that if I ceased to look through the glasses it would be lost to sight amongst all the mass of other stones and boulders.

Studying carefully the shapes of certain large rocks close to where I saw the bird disappear, I ascended the slope, and as I drew near my goal I saw the female bird, who flitted about anxiously.

It took a very short time to find the nest, which was in a hollow on the ground under a smaller stone close to the larger one where I had previously expected to find it, and in it were five young ones. I was young in those days, and being very anxious to rear them, took them with me in spite of their being only in the quilled stage. But I had not brought out from England any insectivorous mixture as I always did on subsequent occasions. At the hotel I obtained some finely chopped raw-meat, hoping to be able to find something more varied and more digestible on my return to Brieg on the following day, but alas! that day was very hot, and I only had a small box in which to carry the young black redstarts, and all succumbed during the long ride down the rough mountain path.

How I did wish I had left them to their parents and to liberty. I felt a brute. Had they lived, they might have become as tame as a brood of wheatears I once reared by hand, one of which I kept, a most charming pet which would play hide and seek with

me round chairs and sofas, and which met a tragic death by being trodden on.

These birds of moor and fen, of crag and torrent and woodland are delightful, and although aviculturists who have the opportunity and the means, naturally like to acquire rare foreigners, to my ears the most beautiful bird voices are still those such as the joyous piping of our song thrush, the fluting of the blackbird, the merry twitter of the linnet, or the "little-bit-of-bread-and-no-cheese" of the yellow hammer, in their own haunts.

BIRD SONG.

BY "BIRDLOVER."

The Kiss of the Sun for Pardon,
The song of the birds for mirth,
One is nearer God's heart in a Garden
Than anywhere else on earth.

Quite unconsciously when one thinks of the song of the birds, one connects their voices with gladness and beauty, spring days with their sunshine and flowers and the riotous loveliness of early summer. And it is quite true that spring and summer, lovely as they are in their green verdure and wealth of flowers, would lose immeasurably if it were not for the many sweet bird voices, which each year "set the woodlands ringing," with their joyous notes. How could we welcome spring without the blackbirds' mellow song, and what would the bluebells do without the cuckoo to waken them from their long sleep? But it is not only during the "glad" season that the birds' voices are heard; whatever time of the year it may be, you have only to go out of doors and listen and you will hear the birds singing, or rather talking to each other; for song is the language of the birds.

Before proceeding further, it will be best to define exactly what we mean by song. For lack of a better word we may describe song as the sound, or sounds, which a bird produces. This may consist (1) of a few simple notes, as in the case of crows and gulls; or (2) of a highly specialised collection of notes, as those of the blackbird and nightingale. There are no doubt many who will disagree with this definition, and will argue that the "caw, caw" of a rook is not a

song whereas the nightingale's music is a most finished and exquisite production. But as we shall presently see, the rook's simple call corresponds exactly in its fundamental purpose to the nightingale's melody, and if we admit that one is a song, we must equally respect the more primitive performance. As already stated, both vocal efforts are of the same value in the bird world, and therefore both may be reckoned as bird song, as distinct from human song, which stands quite apart, and must not be compared with the music of the birds.

Song being therefore the language of the birds, we may expect to find that as each species differs from the other in form and plumage and way of life, each species will possess a definite song of its own. The most casual observer will have recognised, that a thrush's song is different to a robin's, and it is this great variety of bird languages which lends so much charm and interest to the countryside. Each species possesses a definite song, peculiar to itself, and the next question which arises is, how the young bird is able to sing the song of its species? Does it learn to sing through individual acquirement, or through racial preparation, *i.e.* does each species possess a definite, congenital song? This question has long been the subject of discussion; the supporters of the first theory base their argument chiefly on (1) the undoubted capacity of certain birds to learn tunes when kept in captivity, the bullfinch being a well known example; and (2) the facility with which some wild birds, notably the starling, mimic the songs of other species. But if we go direct to nature for an explanation, what do we find? That in a small corner of a garden or strip of woodland, a blackbird, a thrush, a robin, a blackcap, and a willow-wren are all housekeeping, each have a nest of young, and each father sings all day long,—“all spring through till the spring be done!” What is there to prevent the young from assimilating the notes of the more vociferous individuals of other species, in the vicinity of their nest, if song is an individual acquirement, a mere matter of imitation? Nothing, I think, if the congenital factor is excluded; and no doubt the art of mimicry may also be attributed to this factor, a gift which some birds inherit to a greater or lesser extent.

We see therefore that each species possesses an inherited song

and under the heading of song we include the call notes. Bird music may be roughly divided into four kinds or classes, (1) the call note; (2) the alarm note; (3) the signal call and (4) the love call-song proper. But as a bird's voice is capable of an infinite variety of expression, any classification of the calls must not be regarded as definite or conclusive. The more one listens to birds, the more one understands their language. The call note is most often used; it is a short note, or collection of notes, and varies very much in tone and expression as occasion requires; a chaffinch's "pink, pink, pink," as it contentedly feeds on fallen beech masts, differs considerably from the gay "pink, er pink pink" of a party of these birds, as they make their way through the orchard, calling to each other as they fly along. Among gregarious birds the call note is a call in the literal sense of the word, and serves to keep the flock together. The cheery notes of a roving band of tits, or the call of a flock of finches, as they rise from a stubble field, are familiar to every dweller of the country side. The use of the call note among non-gregarious species may be illustrated by the soft call of a mother bird to its young, or the "chuck chuck" of a blackbird calling "goodnight" to its companions as it goes to roost. The alarm note is the danger call, or the cry of distress. In some species, for instance the chaffinch, the alarm note resembles the call note; in others, as in the case of the blackbird, it is quite distinct. In all probability the alarm cry of individual birds is probably meant primarily to warn other individuals of the same species of the approach of danger, but it may also serve to warn other species, witness, e.g. the immediate disturbance and dismay of all in the neighbourhood, when a frightened jay, or blackbird gives vent to its feelings. It often occurs when a motley crowd of birds is feeding in a field, one of them suddenly gives the alarm, and immediately with common consent, all rise in flight. But this stampede does not always take place; the alarm note may send only a few of the birds off in a great hurry, leaving the rest of the company quite undisturbed.

The signal call might be called the migration call with equal truth, for as far as we know, it is only used by birds while on migration. The subject of these signal calls is still somewhat obscure. It is known that migrating waders make use of strange call notes

while performing their nocturnal journeys, but the difficulty of identifying the species and their calls is obvious. It seems certain that if not now, at any rate during the evolution of the species some reason must have been attached to these calls, other than arising from the ordinary needs of denoting proximity. But as so very little is known up to the present about migration itself, it is difficult to arrive at any really satisfactory explanation of these signal calls.

Finally we come to the love call, which precedes the song proper. Some species possess a very simple love call, which may resemble the call note, but differs considerably in strength and power of utterance. For instance, the call note of the nuthatch is a simple metallic note, often reiterated; the love call is the same note, more rapidly delivered in a bell-like silvery tone. Other species possess an entirely distinct love call. The great tit, besides its pretty little song of "spring coming, spring coming," which may be heard on and off during the whole year, and every hour of the day during the spring, has a single clear note, which is only heard at the height of the nesting season. One more point may be mentioned with regard to these love calls. The hen chaffinch has a call peculiar to her sex, a soft and rather plaintive note, which is frequently made use of early in the season; whether the females of other species are gifted with a special call is at present not known for certain.

The precise cause and meaning of the song proper, is still a vexed question, and opinions and theories vary considerably. These may be roughly divided into two categories: (1) That singing is primarily and solely a secondary character, (like other physical characters of sexual selection); (2) that song is an expression of nervous vitality, and may be called forth, by many and varying emotions. The first theory, which has long held the field, rests on Darwin's theory of sexual selection, *i.e.* that the female selects the male by virtue of his superior strength, exhibited by his physical attractions, (plumes of the bird of paradise, etc.) and vocal powers, in comparison with those of his rivals. There is much evidence to support this theory, and although it is too big a subject to discuss fully in this paper, the chief points may be briefly set down. Song is primarily a specialised development of the love call, the special use of which is to call and attract hen birds. Birds' song being

at its best during, and for a certain period after the season of courtship, it is presumed that the rapturous strains of the male nightingale, attract a female to the neighbourhood of the singer, who then, by performing in her presence, wins or loses her by virtue of the quality of his song.

The second theory is the result of careful observation of birds in the field, and is based chiefly on the fact that song is not solely connected with courtship. The simple love call is seldom used outside the season of courtship, or for any other purpose; but song proper may also be the expression of terror or anger, on occasions when courtship is quite out of the question. If a rook's nest of young be approached, the bird will not utter his love call, but simply the usual alarm or call note: while if a nightingale or robin be disturbed, by seeing a suspicious visitor near its nest of young, it will not infrequently give vent to a burst of song. The only record the writer has of a nightingale singing after the young are hatched, was when the bird was disturbed by a camera being placed close to its nest. Both birds emitted the alarm and the call note continually, and at intervals the male hurriedly uttered a few bars of song. Another example of song for other reasons than to charm the lady bird, may be seen in the autumnal fights for a winter territory between two robins, when fragments of song accompany the peckings and scufflings. A sudden loud sound, such as that caused by an aeroplane passing over head, will start every blackcap, garden warbler, willow-wren in the neighbourhood singing furiously. Many other examples could be cited, but enough has been said to show that song is not solely connected with courtship, but may be heard at other times, and for other reasons. What part then does song play in securing a mate? It seems to us probable, that when a hen-bird has been attracted to the neighbourhood of a cock by the latter's song, the song then ceases to play an individually important part in the subsequent courtship. This conclusion is drawn from the fact, that when a male is courting a mate, his song is never at its best; it is jerky, strained and disconnected, and has often little resemblance with the true song; and the hen-bird to whom it is addressed, instead of listening to it and judging its merit, apparently takes no notice of it at all, but quietly continues feeding, without so much as glancing

at her lover. The strained and jumbled outpourings of a blackcap will have no effect on his little brown-headed lady, until such a moment, when his combined plumage and display, and excited vocal efforts, reach to such a pitch as to waken a corresponding emotion in her. Moreover I have on two occasions seen a cock and hen robin wooing each other with precisely the same actions; little bursts of song accompanied by pretty wing movements, and this fact points to the probability that song is not the sole possession of the cock bird, but may on occasion be the expression of emotion on the part of the hen-bird.

In view of these facts, it seems probable, that song is the outcome of a highly developed nervous system, the result of abundant vitality, that vitality being at its highest during the love season, and it is at this time, that we may expect to find bird song at its best. One must not, however, be too dogmatic on problems of wild life; for as we humans can take no actual part in the actual life of bird and beast, our understanding of their ways must always be restricted.

We may conclude with a brief consideration of some interesting features of bird song as a whole. One of the most striking points is the great difference in the degree of the development of song, some species possessing a most specialised and exquisite song, while others can only utter a few harsh, unmusical sounds. It often occurs that of two species which are closely related such as the willow-wren, and chiff-chaff, the one possesses a lovely little rippling song, and the other only a simple though pleasing note. It is also extremely curious, that as a general rule, small birds possess the monopoly of song, large birds being restricted to more or less simple calls.* At present there seems to be no explanation of this phenomenon; nature is jealous of her secrets, and loth to give her reasons as to why she bestows in one case the power of song, and in another the majesty of perfect flight.

As every lover of birds will agree, their songs are singularly characteristic of themselves; the blackbird's lazy flute-like notes, the chaffinch's sprightly lay, and the garden warbler's delicate song, are all very typical of the performers, and these are only a few instances among many. Perhaps the most interesting and curious singers, are those which possess the gift of mimicking the song of other species.

* The Lyre bird is a striking and curious exception,—ED,

Amongst our British birds, the starling and sedge-warbler are experts in the art of producing the songs of others, and their performances in this direction are often remarkable. A starling's *repertoire* can be so varied, and so perfect, each item being finished before the next is begun, that one is lost in admiration of the bird's art. How far this mimicry is conscious or unconscious, one cannot say. It is at least certain, that this is an inherited faculty, which may require some particular stimulus to set it working. Dr. N. F. Ticehurst in his "Birds of Kent" remarks, "on Dungeness Beach and Romney Marsh, where unusual opportunities occur for birds with propensities for mimicry. I have heard the song thrushes imitating the call of the ringed plover, and the red-legged partridge, and redshank.

Some attention has been directed in recent years, to the question of what may be called the "dialect" of bird song; the diversities which are found in the song of a species in different localities, or countries. At the present time, information is perhaps too meagre to permit of a definite opinion, but Mr. Elliott Howard in his "British Warblers" suggests, that probably the climate has an influence on song, and the further West one goes, the lower becomes the pitch.

It will be seen from this brief account of bird song, that the "last word" is not by any means said, and that many problems still remain to be solved. Results of deepest value and interest still await the earnest worker in this most fascinating field of natural research.

SOME FIREFINCHES AND OTHER GAMBIAN BIRDS.

BY Dr. E. HOPKINSON.

(Continued from Vol. VII., No. 4, p. 116.)

It is quite a long time since I had leisure to put pen to paper on this subject and I will now leave the Seed-eaters for a time and give a few notes on some other species, unusual as cage-birds, which I happen to have out here in the Gambia this year. As I shall not be able to take my usual annual leave this year, I rather doubt if they will ever reach home, but if they do I hope to give further details later on. The first is a

RHEINHARDT'S BABBLER (*Crateropus rheinhardti*), caught in February and doing well on a diet of biscuit soaked in milk with about three or four grasshoppers (when obtainable) every day. It is a brown bird about the size of a Thrush, with a black head and pale olive green iris. These Babblers are very easy birds to keep on this milk diet. A pair of *C. platycercus*, similar birds, but without the black head of this species, which I caught here some years ago, lived for six months or more on this diet alone, and part of that time too, while I was busy elsewhere, were left entirely to the tender mercies and care of my black cook—a true test of any bird's powers of resistance. They reached home and lived there at the Zoo for two years at least, I think longer.

2. A SUNBIRD (? *Cinnyris venustus*), a hen unfortunately, but interesting to me for all that, as the first Sunbird I have ever kept. It was also caught in March and is doing well on the usual Mellin mixture, or rather such a modification of that as can be provided out here. A piece of sugar about the size of a maize grain dissolved in water to which Mellin (q.s.) is added and three to four drops of milk to make say a total of two ounces or thereabouts of liquid a day. Two things about the Sunbird's food surprised me. The first is how thin they like the mixture. When I started I made the mixture much too thick, thinking about the amount of solid food which seemed necessary. The second is, how great a quantity (considering the size of the bird) of this thin liquid manages to disappear in a day. From what Mr. Ezra told me about his birds, when I saw them last year, I ought to have expected both these things, but being told and finding out for oneself are never the same, nor make the same impression. For a time the bird was very keen on small flies as well, and caught any which entered her cage, but during May when she had a surfeit of them, as I was then in a particularly fly-infested district, she lost all interest in that form of diet, and confines herself to her syrup, except when flying ants are available. These (small ones) she will eat ad. lib.

These flying ants are the particular delight of all our birds, whether insect, fruit or seed-eater, both in nature and captivity. They come out in millions at this time of the year (June), the first rains, every evening after rain. They vary in size from that of a

hornet to a midge, and towards sunset, when these "bisso" (the native name) are out, one sees nearly every kind of bird from a Hornbill or Kite down to a Waxbill or Grass-warbler after them. To supply one's captive birds means standing the cages round the lamp after sunset, which may seem a rather rough proceeding, but so inured to shocks and jars by months of travelling (by head-load, canoe or launch), are my birds that this vesperinal awakening is nothing to them, and interferes in no way with the healthy meal which they all start at once to make on the insects which flutter or fall into their cages. Besides providing food for the birds, this arrangement also has the advantage of providing their owner with half an hour's amusement in watching the proceedings, at a time when the day's work is done and when the million of these "bisso" make reading or in fact doing anything near the light an impossibility.

I hope to be able to catch some more Sunbirds during the rains, when they are especially plentiful and when too I am more or less resident in one place and not constantly on the march as in the dry season, a life not conducive to the collecting or easy keeping of cage-birds.

No. 3. is a BARBET, *Lybius vieilloti* I think, he has only been caught a few days, but is feeding well on "shotoes" (a sort of fig) and other bush-fruits. The gems of my this year's birds however, I unfortunately have to speak of in the past tense. The first was a Striped Kingfisher, *Halcyon chelicutensis*, which was brought to me in October, when almost ready to fly. At first I crammed him with raw chicken or pigeon liver, but he soon took to feeding himself, and when I found that grasshoppers suited him to perfection (in fact are the main natural food of these land Kingfishers and many other birds), he soon began to look after himself and lived in perfect health till February, when I had hurriedly to go to Headquarters and leave my belongings in charge of the 'boys.' The result was that on my return this bird was dead. "He had refused to feed as soon as he lost his master" was the stated cause of death, but of course the real one was neglect and starvation. The house-boy, who had charge of the birds always got plenty of food for this one, while I was on the spot to stimulate any slackening of his efforts in the grasshopper-catching line, but no doubt he, like all his

brethren, took advantage of his master's absence, to do the minimum of work or anything like work. "Out of sight is out of mind" here as elsewhere, but this particular individual must have kept my return at any rate in his mind for some little time. The other "gem" really hardly deserves mention, as it did not survive 24 hours, and had it not been one of the birds I desire more than all, namely an Amethyst Starling, I should have left its short sad history alone.

I once got home one of these lovely birds, and ever since have in vain been hoping for successors, but they are only common here at certain seasons and so far I have never had an opportunity of attempting their capture. This particular bird was a hen, and had she survived would have been of great value in attracting males, if, as is probable, I shall have this rains a chance of getting at the proper time to the district where these Starlings are commonly found. I was shooting one evening and had just fired, when a Hawk flying over, startled by the shot, dropped a bird he was carrying. On picking it up I found to my delight it was a hen Amethyst Starling, and apparently only slightly injured. Hoping for the best, I took it home, and put it in a cage, but next morning it was dead. It must have been more injured than appeared, the hawk's talons having probably perforated its breast or abdomen, although there was but little blood or other sign of external wound.

Of seed-eaters I have only kept the less common, that is some Quail-Finches, Bar-breasted Firefinches and half a dozen Buffalo Weavers. The remainder of quite a big lot I had collected, Cordon-Bleus and other Waxbills, I let go when I found I was not for home this year.

I am also to take care of (for the rains) a perfectly delightful pair of Brown-necked Parrots, (*Paeocephalus brunneicollis*), which a friend of mine has had for more than a year. Absolutely tame and in robust health they will do anything for a white man and allow him to do anything with them, but absolutely detest the black brother.

In a previous article on this parrot I have said but little good about it as a pet, but now I have these two before me I must amend my opinion on that point.

FIVE LITTLE WAXWINGS AND HOW THEY GREW.

By GEORGE G. PHILLIPS, Greene, R. I.

[From "*Bird-Lore*."]

Into the lives of all of us come, at times, experiences that make their mark and linger in our memories while we live.

The story I am about to tell is of just such an experience that came to me; and, though I can hardly hope to create for others the pleasure that was mine, I am sure that all true lovers of birds and babies who read this will "know and understand."

One day in the summer of 1912—it was July 15—while seated at dinner I heard the cry of young birds.

Stepping to my back door, I found on the doorstep two young and newly fledged Cedar waxwings.

Presently, guided by their cries, I found three more near by.

Now, if it is a notable event to have one baby left on your doorstep, what an embarrassment of riches was mine, who found *five* babies there at once!

"Where did they come from?" was the first question asked. I never knew, for neither old bird or nest had we ever seen or could we find. Undoubtedly, they fluttered from a nest high up in the pine trees, a row of which stands near my house.

Thinking and hoping that the old birds would come to feed them, I left them on the ground for an hour or two. But no parent bird ever came, and after a while the mute appeal of those five gaping bills and yellow throats became too much to bear, and I realized that something must be done, and done quickly.

"What do baby waxwings eat?" was the burning question. The books told of the parent bird feeding them by regurgitation. As that process did not happen to be one of my accomplishments, I took a chance on ripe raspberries, and was greatly relieved to find that they would eat them readily. I immediately filled them full, and from that time it was my daily and almost hourly duty to feed those baby birds.

The second day, I tried bread and milk. That went even better than the berries, and was adopted for their regular food;

though I venture to say that never before did young waxwings grow up on such a diet.

One little fellow, smaller and weaker than the rest, handicapped from the first, gave up his life on the second day. The other four grew and waxed strong and beautiful; grew, oh, so rapidly! taking on from day to day the exquisite colouring which so beautifully marks the adult bird.

How much did we feed them? some one may ask. There need be no mistake on this point. I put the food in and pushed it down until they were full—until I could *see* it. A pretty habit of theirs was, when full, to pass the proffered morsel to a next neighbour, a bit of politeness characteristic of this gentle and interesting bird.

To keep my little pets from straying and becoming a prey to prowling cats, I made of chicken-wire a cage on the lawn, and rigged perches in it on which they would snuggle up to each other in the most affectionate way.

At night I took them into the house, in a little wicker basket, for safe keeping, putting them out each morning.

From the first, they showed a most remarkable absence of fear, and not the slightest aversion to being handled.

About two weeks of faithful feeding and care, I began to wish that my birds could help themselves, so that I might feel justified in giving them their freedom.

But it is a trait of young birds not to feed themselves as long as somebody else will do it for them, so that it was not until July 31, sixteen days from the day they came, that I brought myself to the point of letting them go.

After breakfast that morning, I took their basket up into the berry patch, where they could find plenty of food, and not without considerable reluctance, gave them up to Nature's keeping. They showed no special delight at being free. They flew about the berry bushes and up into the pine trees, occasionally returning to perch upon my arm or shoulder, and I soon found it was not so easy to turn off foster children. If I was ready to let them go, they were by no means ready to give me up.

About this time I was doing some rustic work a short distance

from the house and for days the little creatures were my almost constant companions, flying about in the maples over my head and coming down every little while to get their bread and milk, a saucer of which I kept on the ground by me.

Wherever I was about the place they were liable to appear. Each morning as I stepped on the porch their cry greeted me, and instantly four little monoplanes would be coming full speed toward me. I always threw up my arm for a perch, and they would suffer me to carry them thus about the grounds and to the house.

Their familiar, enticing ways were completely captivating, for if it was beautiful to have them so tame in captivity, it was perfectly charming to have them show such trust and confidence when at liberty, and I was their willing slave while the little drama lasted.

Two of the birds I was always able to identify—one, the only one of the brood that had the sealing-wax tips on his wing feathers, and another who had a white spot on his shoulder, where he had lost a feather. This last was tamer than all the rest. After his breakfast of bread and milk, he would perch on my finger by the half hour. He seemed to like the warmth at his feet, and I would carry him thus perched into the house and up-stairs, to show to my wife, who perchance had not yet risen. Then he would sit in the kitchen rocker for a time. When I held him up in front of my face, he would peer into my eyes, throw up his crest, and twist his head from side to side, evidently studying me quite as much as I was studying him.

Then he would pull at the hairs of my moustache, perhaps thinking it might make good nest material.

For two weeks this pretty intercourse lasted. Gradually their visits grew less frequent. Finally, one morning at breakfast, I heard the well-known cry, and, hurrying out on to the verandah, I found two of the birds taking their breakfast of bread and milk—the red-tipped one and my tame one.

I noticed at once something unusual in their behaviour. There was something strangely hurried and urgent in their manner, as if important business was to be attended to.

Hurriedly they swallowed their bread and milk, just for a moment my favourite perched on my finger, then with a whirr they

were off and I never saw them again, to know them. For many days I heard their cry—a singularly elusive note, amongst the cedars by the brook, and sometimes saw large flocks of waxwings, which my birds had doubtless joined. Dear little Comrades! I shall never see or hear a waxwing without tender thoughts of the little creatures who gave me a month of such genuine pleasure.

A VISIT TO BRINSOP COURT.

By A GUEST.

Readers of this Magazine have already gained from the Editor's pen glimpses of the home that is his, and seem to know all his birds quite well. Mr. Astley has given us many interesting facts in the old history of Brinsop Court, but the charm of the place it is beyond his power to convey—or anyone's. For it lies in the dream of its sleepy hollow, wrapped in the memories of its ancient past, yet kind and gracious to those who treat it lovingly in a century of clamour and of stress. The grey stone walls, lichened stone slabs of its roof, quaint brick chimneys and mullioned windows are reflected in the water of a moat. The heart of the buildings is in a courtyard enclosed on every side by walls (some of them half timbered) and therefore quite unsuspected until one glances down from a gallery upon its repose. The moat is, with an adjoining pond, the chief home of the waterfowl; but there is another and more distant moat enclosing a meadow beyond.

Practically all the ducks usually seen in collections are there at Brinsop, besides Japanese, Ringed and Cinnamon Teal (the last really a Shoveller) and best of all Falcated and Cotton Teal; the Falcated drake* on the occasion of this visit was in most perfect plumage. The swans include Black-necked and Coscoroba, and the geese Ruddy-headed, Bar-headed, Lesser White-fronted and others, including the dear little "mewing" geese (Maned geese) which Mr. Astley has described to us before now.

The aviaries and their inhabitants are already well-known to us, but it is delightful to go through them, and also to see in a

* Is the Falcated duck a true teal?—ED.

separate cage the Motmot, very proud from having lately had his wonderful racquets appreciatingly described in print.

The most noticeable birds at Brinsop—if only because the biggest and the noisiest—are the Flamingoes and the Cranes. Two species of flamingo are represented, the European and the Mexican. It is not often that one has an opportunity of seeing a flamingo swim, but one part of their pond is deep and the flamingoes often cross in this way. They manage their long legs wonderfully well when swimming, and make very good progress. If I remember rightly they keep their necks still and do not move the head and neck as a swimming heron does. They sleep so much in the day-time that they are very wide awake and talkative at night; whenever you happen to wake up for a moment you hear the flamingoes arguing.

The cranes are in paddocks—the Sarus, Native Companion and Manchurian—but in a large meadow away from these a pair of White-necked cranes were nesting. They had been at it for over a month and nothing had happened, so the one egg was removed: it was addled. It was very interesting to see the way the birds behaved while this was being done. Both in turn pretended to be injured, though the hen was perhaps the better actor of the two. She crouched on the ground with wings widely extended, and so went trailing through the buttercups, hoping to lure us away. Going through these manœuvres the pair gradually withdrew to a greater distance while the robbery was going on. They did not know the egg had been taken, and were so overjoyed to see us leave the ground that straightway they began a dance; they drew themselves up to their full height and then advanced by two stiff little dancing steps at a time, calling all the while. So they came back, nearer and nearer to the nest which they inspected closely. The poor hen thought that though she could not see the egg it must be there, and that she would be able to feel it, so she sat down on the nest. But it was no good, no egg was there, so very soon she gave it up, and the pair walked off and pretended to forget all about it.

One of the prettiest things at Brinsop Court are the House martins. There are many nests (in spite of the robber sparrows) and one row of them is low down under a roof near the front door.

You cannot quite reach them with your hand but very nearly so. The confiding little birds chose that place because they felt sure that the sparrows would not dare to come so low : and they were right. Not only so, but the martins by finishing the hole extra small—so small that they can only just squeeze in—have in any case made it impossible for a sparrow to enter.

For one who has been there, Brinsop Court remains as a delightful memory of wings and water, sunshine and song.

MY BIRD NEIGHBOURS.

By MRS. L. H. TOUSSAINT, Rio, St. Lucie Co., Florida.

[*From "Bird-Lore."*]

My bird family usually consists of eight Florida Jays, six Florida Blue Jays, one Brown Thrasher, five pairs of Cardinals, four Mourning Doves, three pairs of Towhees, about a dozen Grackles, one pair of Woodpeckers, a covey of Quail, and a Sandhill Crane. These I feed regularly ; of course, there are many others in the orange grove that are not so tame. Then we have numerous small birds that devour the worms on mulberry trees. My Jays and other birds are very tame. We buy crackers wholesale, wheat, corn, unroasted peanuts, and grape-nuts for the birds. The Cardinals, Towhees, and Quail love the wheat ; all eat crackers ; the Crane and Jays eat corn ; the Grackles eat crackers, and always soak them in water before eating ; they also eat table scraps. I like to have the flocks of Grackles arrive in the fall, they so often bring visitors with them, generally Red-winged Blackbirds. Peanuts are the Jays', Cardinals', and Towhees' speciality. The Jays will take them out of my apron-pocket. I always carry nuts with me, as I am sure to meet the birds somewhere. The Cardinals fly to the windowsill, and if they see me inside, chirp for peanuts, then they fly to the door. They are always the last to come for supper, and I am sure I could get them to eat from my hand if the Jays were not so jealous that they will not allow it.

My Crane eats raw meat, fried pork, and sometimes crackers, but his favourite food is grape-nuts soaked in milk and formed into pellets ; he also eats insects.

My garden and greenhouse are always full of birds I feed them and they hunt insects for me. My greenhouse is made of laths, and the birds can fly in from top or sides; when I am working there they keep me company. The Jays fly on to my head or shoulder and beg, and if I don't pay attention to them they pull my hair and pinch my ears, or pull the hair-pins out of my hair, until I give them peanuts. When I sprinkle the plants, they fly back and forth through the spray. They sit on top of the shed for me to give them a shower-bath, fluff their feathers and stay until they are soaked. When I turn the water on the Crane, he dances.

The Florida Jays are most intelligent, If I give them a whole peanut and then hand them a kernal or two, they will look at the kernals, lay the whole peanut in my hand, take the kernals back in their throat, and then take the whole peanut. The Jays are not afraid of snakes; I have seen them alight on a snake and pick it and scream. When one gives the danger-signal, the others all fly to him and join in the uproar, showing us where the snake is. One day, while killing an adder, one Florida Jay was on my head and another on my shoulder, both screaming with excitement. I have found the Florida blue Jay the hardest to tame, but I succeeded after a great amount of patience in coaxing them to perch on my hand for peanuts; when they brought their young, it did not take two weeks to tame them.

Birds have dispositions like people; some are so gentle and sweet, others regular little bullies; they tease each other and play, and they love to be flattered.

My Cardinals bring their young here to be fed, and when they can feed themselves the old birds leave and I see nothing of them for several weeks; when they come back and chase the young ones away to "shift" for themselves.

I had a very tame Woodpecker which was fond of peanuts; he would sit or hang on my little finger, while a Jay sat on my thumb, taking cut peanuts from my palm. One day I noticed that he had difficulty in eating and, on examination, I found that his tongue was broken in half, the lower part being so swollen he

could not swallow. Before we could devise means to help him, he disappeared.

Jack, my Sandhill Crane, and I go to the grove almost every morning to hunt insects. He digs into the ground the length of his bill and brings out fat grubs, which apparently he hears beneath the surface. On one occasion he dug out a mole and killed it. We have a large variety of spiders that live in holes in the ground; when Jack sees one of these holes he chuckles and makes a dive for it. Our negroes are all very fond of Jack, and he has his favourite among them. When this man is hoeing, Jack follows him to get the insects he turns out, talking and chuckling all the time. He has a great variety of calls, and when hungry grunts or utters a fretting note; when he is pleased he chuckles; and he spreads his wings and hisses like a goose when a Buzzard, Osprey, or Eagle flies by. We talk to him as we would to a dog, and he seems to understand us. About once a week he goes flying and, after circling around the place, lands in the grove and waits for us; or sometimes walks back when, if the sand is hot, he stands in his bath-tub to cool his feet. Every evening before he goes to bed he dances, and the more we applaud the more active he becomes.

One of our friends had a pair of Egrets. He found the two young in the nest; the mother bird, with six other bodies, lay in a heap with wings and plumes taken. He raised the birds and had them a long time. One sickened and died, the other must have lived four years longer, when he was killed by a Horned Owl.

MISCELLANEOUS NOTES FROM BRINSOP COURT.

I had hoped for hybrids from my male orange-headed bullfinch, (*P. erythrocephalus*) and a female British bird. Last year they had three nests, but all three eggs were clear. This year the hen bullfinch has again had eggs, apparently with the same result. Yet the two birds are devoted to one another.

The male orange-headed bullfinch, from the Himalayas, is delightfully tame in a large aviary. He is really named "red-headed," but the colour is not the least red, even in the wild birds—at the best, it is a good orange.

The one Australian blue wren that I have had since July, 1914, has just partly come into colour, it being the approach of Spring time in this lovely little bird's native land. My bird is in perfect condition, and very sprightly with his long tail cocked up; but he is always of a timid nature. He has a tiny song, somewhat resembling that of a golden-crested wren.

My ten flamingos are looking very fine now, after their moult, which began, I think, earlier this summer. Of the two red Mexican flamingos, the female always remains pale in colour.

I find they are very fond of soaked dog biscuit, two or three of which I put in water over night.

The cotton teal, the males of which little company were beautiful during April, May and June; have gone into the eclipse plumage.

The Motmot, who figured in a coloured plate in the magazine, is moulting for the third time since I have had him. A most omnivorous bird as to food, a cut up sparrow, chopped lettuce and sow thistle, fruit of any kind, cheese or cake, etc.; all are welcomed.

He escaped from his cage one day, when it was in the garden, but he flew straight into the loggia and from there, into the dining parlour.

I have been greatly tempted to let him loose again! I don't think he would go far.

The loud croaking of the pink crested touracos on warm days sounds very tropical.

I have had to try and make them do without fruit, and they have taken to boiled rice mixed with 'suttoo,' which is a kind of pea-meal from India. They lived on apples, for the most part, from September to May.

There is always war! "Big fleas have little fleas, etc."

A male Sarus Crane became so dangerous, that he had to be penned up. His mode of attack if any resistance was shewn, was to jump in the air at people and then lunge out with his powerful bill. When one day he finally pecked my wife on one of her eyelids, just missing the eye, I went for him : but I was armed with a shovel with which I had been cleaning out poultry houses.

The great bird fenced with me, and to prevent his thrusts, I waved the shovel up and down. At the moment of a downward stroke, the crane rushed in, and I inadvertantly caught him a whack on the top of his head, and he dropped like a dead bird. Indeed I thought it was his end. It reminded me of the illustration in Thackeray's, "The Rose and the Ring," when King Padella was floored with a warming-pan.

I lifted the bird up, and supported his head which hung down limply, and in a few minutes signs of returning vitality were seen. Finally he opened his eyes, looked at me as much as to say—"where am I, and what are you doing?" and actually struggled to his feet and went for me again! Never did I see anything so undefeated.

Really a horrible bird; for if one throws him food, he will walk round growling like a vicious dog. Last year one of his wings was broken, it was *said* by a bullock in the field, but I have my doubts, and could not blame anyone for using a big stick in self-defence. A Hun amongst birds!

HUBERT D. ASTLEY.

CORRESPONDENCE, NOTES, ETC

THE ILLUSTRATION FUND.

A member, whose identity is to remain unknown, has most generously given a cheque for £40 toward the expenses of the illustration fund, etc., since it is evident that the magazine cannot be kept up as it is, especially with increased expenses in connection with printing, etc, upon the income derived from subscriptions, a certain number of which are not sent in at all regularly. Up to August, **129 MEMBERS HAD NOT PAID!!** But we would wish to appeal to members not to permit one or two generous donors to bear all the extra expense in making the two ends of the balance sheet meet, Will not a good many send half a crown or five shillings? The treasurer has had some anxious days with regard to the

financial position, and he is furthermore constantly working in connection with the War. The Editor has lately received some beautiful full-page photographs from Nairobi, sent by Dr. V. G. L. Van Someren, which certainly ought to be reproduced for the magazine.

Will not members who have neglected to send their subscriptions, add, for conscience sake, five shillings ?

BRANDLING WORMS.

DEAR SIR,—‘ Secretarius ’ is clearly right in his identification of the worms as brandlings ; and his discovery that they are suitable food for ouzels, at any rate is interesting and useful, and I must admit, a great surprise to me. At the same time, I do not regret having sounded a note of warning as to the general use of brandlings ; *some* birds can eat unscoured gentles without disaster . . . quod eibus venenum !

I am, yours, etc., TAVISTOCK.

RESIGNATION OF THE HON. SECRETARY.

It is with the greatest regret that we have to announce the resignation of Dr. L. LOVELL-KEYS as Hon. Sec. He has been very unwell, and furthermore has now offered himself for service in the army. This is a real loss to the Society, for there has never been anyone, holding the post of Hon. Sec., who has been keener or more helpful. Dr. Lovell-Keays has thrown himself into the work with the greatest enthusiasm, backed by experience and knowledge of the first order.

BREEDING OF YELLOW-WINGED SUGAR-BIRDS.

MISS CHAWNER writes to the Editor : “ You will be interested I know to hear that two little Yellow-winged sugar-birds left their nest this morning and are comfortably perched on twigs near to it. Their mother now feeds them on sop as well as live food which is a relief, as the weather seems to have broken and sweeping may become difficult. They were a fortnight old yesterday and are well feathered for their age, Sunday however very nearly bore out its reputation for catastrophe, for when I went to the aviary this morning one nestling was hanging and doing ‘ roast pig,’ having got entangled in the tow-lining of the nest. Fortunately it had not long been thus and seems none the worse now. The hot weather has brought them on much more quickly and they are now as well feathered and strong as their brothers were at the age of seventeen days. I hope presently to be able to report that they have begun to feed themselves. This brood has been reared mainly on those little grey moths which abound in meadows just now, and I fell back on stick insects instead of mealworms, when the dew was too heavy for ‘ sweeping ’ Let us hope that the weather this time will be kind till the little ones can fend for themselves. It will be interesting to see how long their beaks take growing, they are quite short at present.”

Lyndhurst, 13th August, 1916.



RED-WINGED BUSH-SHRIKE.

(*Telephonus Australis minor.*)

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**NOTES ON THE
 RED-WINGED BUSH SHRIKE.**

Telephoneus australis minor.

By Dr. V. G. L. VAN SOMEREN, M.B.O.U., etc.

Our Editor has sent me an appeal for notes on birds of this country and I hasten to comply.*

In British East Africa we have many kinds of Shrikes of divers colours, shapes and sizes, but in the majority of cases they are of a quiet, docile disposition, and are therefore eminently suited for aviaries. They are easy to keep and make an interesting addition to one's runs.

A glance at the accompanying plates will give one a good idea as to the colouration of the species under notice. In newly-moulted birds the mantle is an ashy brown with an ochraceous tinge; the crown slightly more tinged with brown; the superciliary stripe, whitish outlined above and below with black, the lower line passing through the eye; the underside from chin to under-tail coverts whitish, tinged with ashy-grey on the breast and ashy grey-brown on the flanks.

The tail feathers are black, with white tips, except for the central pair which are dark grey cross-banded with black.

The wings are a red brown when closed, but when opened reveal the inner webs which are a brownish black. Although not possessing any striking or brilliant colour as is the case in some of the *Chlorophoneus* group, these birds by virtue of their movements and general deportment are extremely attractive.

* We hope Dr. van Someren will give us many more.—ED.

They are rather skulking in their habits and frequent the dense scrub and thick foliated trees, and do not trouble to fly off if one approaches the bush in which they are hiding. For this reason they are easily caught, one has simply to place a trap of the nightingale type under bushes frequented by these birds and one is almost certain to catch two or more.

After the second day of captivity, they become very tame and can be turned into a large run and are soon quite at home, and will come forward to be fed from the hand. I have had a fine pair for the last nine months and they are as fit to-day as when newly caught.

During the breeding season these birds are very tame, and with a little care, patience, and trouble will allow one to sit by the nest while one of the parents broods and the other sits in the bush not far off. It was in this way that I procured the photos which accompany these notes. Unlike the Red-backed Shrike, these birds almost invariably nest in the base of some thick bush, low down to the ground, and seldom in a thorny one. They make little or no use of a larder, for their food consists principally of soft insects, grubs, caterpillars, young stick insects, mantis, and grasshoppers. White ants, too, form part of their dietary.

As far as possible I endeavour to keep my birds on this food, but occasionally have to give them hard-boiled egg into which a little white cheese has been grated.

I have lately had a nest of this bird under observation: it contains three young about four days old, and every day I take a saucer full of egg and cheese to the nesting-place and sprinkle it on the ground near by. The parents at once come down and feed the young on the mixture. If the male bird sees me going to the spot he at once lets his mate know of my approach by uttering a churring note and flying into the nearest tall tree from which he glides down with wings outspread towards the nest, the while uttering his call note, which consists of three loud clear notes, followed by a series of notes in descending scale and volume. This call and glide is part of the courting performance.

The colour of the eggs of this species is a pale pink, with Indian red or crimson brown streaks and spots. Two or three form the clutch, though four have occasionally been found.



RED-WINGED BUSH-SHRIKE ON NEST.

(*Telephonus Australis minor.*)



RED-WINGED BUSH-SHRIKE.

(*Telephonus Australis minor.*)

THE IMITATIVE POWER OF BIRDS.

By Dr. A. G. BUTLER.

In an article on Bird Song in the September No. of our Magazine "Birdlover" asks—"does each species possess a definite congenital song?" and he comes to the conclusion that it does, because if not "What is there to prevent the young from assimilating the notes of the more vociferous individuals of other species in the vicinity of their nest, if song is an individual acquirement, a mere matter of imitation." If our friend had read a very careful treatise by the late Charles A. Witchell * entitled "The evolution of Bird-song with observations on the influence of heredity and imitation" he would have been aware that this is exactly what frequently happens in the case of wild birds.

Undoubtedly the song of many species appears to be hereditary, though in the case of the best singers the performance of two individuals of the same species, while similar in character, is utterly dissimilar in detail. Two Song-thrushes may have certain phrases in common, but their songs as a whole always differ, and so it is with several of the best singers: moreover many of them introduce into their music parts of the songs of other birds. It is not only the Mocking-birds of the New World which delight our ears with a combination of the melodies of other and varied performers; I have heard our Song-thrush and Blackbird, when singing against a Nightingale in a Kentish plantation, steal many of his phrases to improve their own songs.

As a general rule a young bird in the nest hears its father's (or its mother's song, for many hen birds sing[†]) performance far more frequently than that of other species, and consequently its own song is likely to be similar in character; but that this is not invariably the case is certain from the fact which I recorded (British Birds with their nests and eggs, Vol. I., p. 119) of a cock Sedge-Warbler singing the song of a Blackcap. The late Mr. Edward A. Fitch, of Maldon in Essex, who was with me insisted that the nest

* Published in 1896 by Adam and Charles Black:

† A hen robin which followed me about my garden, whenever it saw me weeding this year, sang repeatedly, rather to my surprise as I had never heard a hen robin sing before.

of the bird must be that of a Blackcap because of the song of the male parent : by successfully handrearing one of the young I proved that my identification of the nest was correct, much to my friend's surprise.

Handrearing wild birds is an excellent test of the character of bird-utterances. Call-notes and notes of alarm, which are bird-language as distinct from its song, are generally, probably invariably, inherited ; although domestication sometimes adds considerably to the number of notes of a similar character ; but the song proper (in the majority of cases I believe) is only learned by hearing a cock bird of its own species singing during its upbringing ; if another kind of musician performs regularly in its vicinity it will learn the song of that bird in place of its natural one. Even a Skylark or Wagtail, the songs of which are inherited, may introduce phrases from the melodies of other performers near to them.

The same individual bird does not always repeat identically the same song, as though it were a gramophone record : as I have noted elsewhere my hen Hangnest sang nine utterly dissimilar songs, giving the preference to two of them which were frequently uttered ; none of them was in the least like that of my old cock Hangnest ; moreover the love-song and the fighting-song (which I should think would probably be similar to, if not identical with, that sung by the hangnests and some other birds when in great pain or terror) are not alike. Before the war I obtained gramophone-records of the love-song and the fighting-song of the Nightingale from Germany : * to be sure they are both very inferior to the performances of the wild bird, but they indicate the different character of the two, although not quite correctly : the love-song should begin with the long-drawn soft plaintive whistle repeated from four to nine times, which is quite as characteristic of the bird as the water-bubble note,—the so-called "jug-jug" : I have heard the Blackcap imitating the latter and other of the notes of the more refined singer in the Kentish woods.

It is of course well known that caged wild birds frequently pick up the notes of other birds in their vicinity : my old Hangnest still occasionally utters the metallic *chyang* which it picked up from

* I wish I had waited until now, as the British branch of "His Master's Voice" now issues both on one disc at a considerably lower price (B. 390. Cat. No.)

my Blue-bearded Jay, although the latter bird died seven years ago : it is not therefore surprising, if an adult example learns and retains permanently the notes of other species, that young nestlings should often acquire and incorporate with, or substitute for, their proper song that uttered by some loud-tongued neighbour.

The song of birds is supposed to have originated from the more simple call and alarm-notes repeated and modified : they still frequently recur as parts of the song ; indeed, as Charles Witchell points out, the goldfinch, house-sparrow and linnet appear to construct their songs wholly of call-notes and danger-cries, and he indicates many other British species whose songs consist chiefly of a repetition of single cries.

Although Witchell mentions certain birds, the females of which are recorded by Rennie as singing, viz., the redstart, blackbird, willow-warbler and bullfinch, I think he is wrong in his statement that "songs are generally uttered by male birds only." I think he should have said that song is more characteristic of male than of female birds. The hen green singing finch, canary, siskin, goldfinch, skylark, and probably numerous others are able to sing and do sometimes enliven us : Witchell admits that the female starling sings, and he quotes Bechstein's authority for the subdued warbling of both sexes of the nightingale when courting. As both sexes hear the song of their father while in the nest, it would be rather strange if male youngsters alone acquired the power of imitating it in after life ; but as the song of birds is an expression of excitement and, so far as one can judge by watching birds in aviaries, seems not to be in the least attractive to their wives, the less excitable hens cannot be expected to sing so frequently as their husbands.

Song-thrushes sometimes sing when fighting, as F. St. Mars points out in his nature-story in the Red Magazine for Sept. 1st, p. 440 : loud music will also start them off and especially a brass band, as too naturally the pursuit of the female : but it has always seemed to me that hen birds were more scared than attracted by their lovers' musical efforts ; on the other hand the soft love-calls do appear to please them.

In captivity, many birds whose song consists only of harsh call-notes or screeches can be taught both to whistle tunes and talk :

there is therefore no reason that I can see why they should not with equal ease learn to sing the songs of melodious birds : yet I have never heard any of the Crow or Parrot groups reciting the wild songs of other birds, although they frequently pick up their single notes : surely if a parrot can learn to repeat the tunes and words of three songs in succession, as the late Mr. Abrahams' Amazon did, it should be capable of learning the song of a Blackbird.

BREEDING NOTES—AND OTHERS— FOR 1916.

By the MARQUIS OF TAVISTOCK.

The breeding season of 1916 has been principally remarkable, as far as my own birds are concerned, for hopes unfulfilled. This has been due, not I think to bad weather, but to the fact that most of my stock are confined in small temporary quarters owing to the war, and while perfectly healthy and contented, are deprived of what I believe to be a *sine quâ non* for the successful breeding of most parrots—abundant exercise for many months previous to the nesting season. I have therefore to record 'clear eggs' with monotonous frequency.

A hen Banksian cockatoo, kept with a cock Western black cockatoo in a small outdoor aviary, laid a single egg last autumn and incubated on the floor of her cage without result, as the male bird was quite indifferent to, and rather afraid of her, and cared only for human society. About a fortnight after ceasing to sit, she laid a second infertile egg, but made no attempt to incubate it. A few months ago, to our great surprise, the *C. stellatus* was seen to feed his companion, who indeed ceased to take any food but what he gave her. She again laid on the floor of the cage, disdaining the nest-box, but though she sat steadily for three weeks, the egg was clear and her efforts were unavailing. At the time of writing she seems about to lay a fourth egg. I may add that his marriage has in no way spoiled the cock's temper and he continues as friendly as ever to the human race.

A pair of gang-gang cockatoos nested in a box in a large cage

and incubated their three eggs steadily but without result. The cock sat quite as much as the hen, as is the custom with these birds when at liberty.

A hen Lutino Indian Ringneck—lent me by Mr. Ezra—paired with a green cock and laid four eggs which were clear. The birds were in a small indoor flight.

A hen Lutino Plumhead also laid three eggs, but as she is a bird of suffragistic views and will not tolerate a male member of her species anywhere near her, it is not surprising that her attempt to perpetuate her species "on her own" likewise ended in failure.

A pair of Barraband's parrakeets in a small indoor aviary had clear eggs, and some Blue-winged Grass parrakeets fared no better.

A pair of Guiana parrotlets nested twice in a big cage without result and seem disposed to make a third attempt. The cock feeds the hen on the nest and spends a good deal of time with her in the box, but I do not think he ever incubates the eggs himself.

A pair of Red-capped Parrakeets which had passed the winter in a large cage, nested in an outdoor aviary, but the eggs were clear as on a previous occasion. I have no doubt that I could breed these birds if I could winter them out-of-doors, but the species is so rare and so subject to chills that I do not like risking my last pair.

Stanley parrakeets have always failed with me when the cocks have been caged during the winter, so last year I determined to leave my best cocks out of doors. Of four hens, one did not breed, one became egg-bound and was saved with great difficulty, and the remaining two laid five eggs each and hatched and reared three and two young birds respectively.

A young hen Redrump—bought chiefly out of pity and a desire to terminate her unhappy existence in a small cage in a dealer's shop—was so grateful, apparently for her release, as to pair at once with a newly acquired cock, go to nest in an aviary containing several other birds and hatch a family, which she is now engaged in rearing.

A young Port Adelaide parrakeet, bred at liberty and living free, paired with a Cuban Amazon parrot and nested in an oak tree. Unfortunately the parrot died or was killed before she had a chance of hatching her eggs. This odd couple were much attached to each

other and nearly plucked a King parrakeet, who was so ill advised as to try and interfere with their house-keeping.

Since moving part of my collection to Hampshire and the Isle of Wight, I have been greatly troubled by cases of cerebral hæmorrhage among my birds—a disease I hardly ever had a case of in the Midlands. An Albino Grey parrot, a very charming talking bullfinch, a Stanley parrakeet, a Hooded, two Many-colours, and several Red-vented blue-bonnets have all fallen victims within the past year. I am positive that neither old age, excitement, fear, nor over-feeding had anything to do with these birds' illness, which I am inclined, for want of a better solution, to connect with the very hard water one gets here. The use of boiled water seems to decrease the mortality.

CUVIER'S PODARGUS.

By GRAHAM RENSHAW, M.D., F.R.S.E.

Owing to the extra trouble involved in their upkeep, birds which require to be hand-fed are comparatively rare in confinement. This very rarity, however, renders them interesting, and much remains to be learnt of their behaviour and habits. For instance, Cuvier's Podargus, an Australasian form, is but seldom imported into Europe, and is practically unknown to aviculture. This is unfortunate, as the bird is very quaint and interesting, and is a species which deserves to be much better known than it is.

Cuvier's Podargus (*Podargus cuvier*) is a small form of *Podargus strigoides* of Australia. These birds are very mutable, both in size and colour: some individuals are light greyish brown, others are darker, others again are markedly rufous. In spite of their mottled plumage, crepuscular habits, and wide mouths, they have no real affinity with the nightjars which they outwardly resemble: their anatomical structure revealing important differences from that of the latter birds.

The first specimen seen alive at the Zoo.—and probably the first seen alive in England—was purchased on January 14th, 1862. Apparently it did well in the menagerie, living till 1866: its anatomy was afterwards investigated by the Society's prosector. Other ex-

amples of this or allied species have been exhibited at rare intervals in the Regent's Park collection. One of these later accessions attained to newspaper fame, a sketch of it appearing some fifteen years ago in an illustrated weekly. The bird was depicted solemnly



CUVIER'S PODARGUS.

Photo. by Graham Renshaw.

perched on a tombstone, with a full moon shining, serene and bright, behind it. Beneath ran the legend:—

"A new arrival at the Zoo: the Podargus. The Podargus swallows young mice with the same freedom that a canary swallows hemp seed. Its favourite habit is to sit on tombstones."

A Cuvier's Podargus studied by the writer several years ago remained awake though sluggish during the daytime: when ap-

proached it was quite alert, fixing its beautiful golden eyes upon the intruder. IT IS A MISTAKE TO DESCRIBE THESE BIRDS AS ASLEEP DURING DAYLIGHT, AS IS DONE IN BOOKS ON NATURAL HISTORY. The resting attitude of Cuvier's Podargus is entirely different from that of a nightjar: the Podargus half stands, half clings, pressing closely against the trunk of the tree in which it shelters, whereas the nightjar squats ALONG the branch on which it perches. A little knowledge is a dangerous thing—the writer recollects a stuffed Podargus in a provincial museum which had been mounted in a nightjar attitude—perched ALONG a branch—by the taxidermist, who no doubt prided himself on his special knowledge. The tongue of Cuvier's Podargus is very curious, like a filament of horn protruded from the mouth.

In captivity, the present species may be fed on raw meat, which should be previously soaked in water. It will also take mealworms and cockroaches, and even houseflies, though the latter, engulfed in its enormous mouth, recall the familiar needle in the bundle of hay! When the beak is opened, the enormous gape extends so far backwards as almost to appear to split the head in two. If alarmed the Podargus elongates and stiffens its body, and thus in its mottled plumage simulates the stump of a branch. The illusion is perfected by the bird's grasp of the bark, as it clings in a slanting posture to the rough wood.

So rare is Cuvier's Podargus in captivity that in many years experience of European Zoos. the writer has never come across it. Some ten years ago, however, a single individual was advertised for sale in this country.

BREEDING OF THE PINK-CRESTED TOURACO.

Turacus erythrolophus.

One pair of my pink crested touracos have nested, one young bird being hatched, which lived until it was feathering nicely; but unfortunately, I think owing to desertion on the part of the parents, I found it dead in the nest on the 5th of September.

It was the size of a big thrush, with black down, and blackish

feathers coming through, the secondaries of the wings were dull bottle-green. The bird was in good condition, and it is a thousand pities it succumbed. Had I taken it and reared it by hand, I believe it would have lived.

The nest was built of fine sticks on the top of a collection of dead branches, and resembled a wood-pigeon's. It was about nine feet up in a dark corner of one of the roosting houses.

The female touraco was an excellent mother up to the 4th of September, and when the young bird was first hatched (as I supposed) pecked at my hand when I climbed up one day in early August, thinking that she was still on eggs which were addled. When I had a fleeting glimpse of what looked like a black toad, I hastily descended.

The young bird had not yet acquired the formation of the adult's feet, that is with two toes in front and two at the back, as in the case of the Cuckoo; its feet showed no sign of this, although the bird was in no way malformed. The three front toes were perfectly level in each foot, with the back toe in the ordinary position.

The bird must have been quite a month old.

HUBERT D. ASTLEY.

BIRD LIFE ON YANKO CREEK N.S.W.

By CHARLES BARRETT, C.M.Z.S., R.A.O.U., Melbourne.

[We are indebted to "The Emu" for this interesting article.]

Rambles in Riverina in the nesting season are not, perhaps, always so profitable as those I enjoyed in November, 1913. I owed my success to the late Mr. Max Eggar, a keen observer, who was intimately acquainted with the bird life of Jerilderie and surrounding districts. Delightful days we spent together, wandering across the plains and along the banks of Yanko Creek. My companion seemed to know the nesting haunt of every species within a radius of 40 miles. I arrived in Jerilderie with 12 dozen plates, and few remained unexposed when I left. Many of the photographs obtained were of subjects that have rarely faced a camera. My

harvest of sun pictures was large, and every hour spent among the birds was filled with interest. Besides, Mr. Egger gave liberally from his stock of bird lore, which appeared to be inexhaustible.

A few days were spent in and around the town. White-browed Wood-Swallows (*Artamus superciliosus*) were nesting in every tree along the streets, on fence-posts, and other sites. Nests of the Sordid Wood-Swallow (*A. sordidus*) were also noted. From the hotel balcony I watched a pair of the former species feeding three fledgelings, perched in a tree whose branches brushed the railing. Every few minutes one or other of the parent birds would come swooping from the sky with a bunch of insects held in its beak, distribute the food, and shoot into the blue again. At any time in the day, if one looked overhead, Wood-Swallows could be seen flocking the sky, some at a great height. "Sky" is the local name for all the species of *Artamus* that frequent Jerilderie, and it is both pleasing and suitable, for the birds seem to revel in their beautiful flight.

In my companion's garden many birds were nesting. Wood-Swallows, of course, being in the majority. A box-thorn hedge, fencing the western side of a paddock, was favoured by Tricoloured Bush-Chats (*Epthianura tricolor*), and I spent nearly a whole afternoon with the camera at a nest which contained three heavily-incubated eggs. The temperature was over 100° in the shade, and, though I protected the camera with the focussing cloth, the base was cracked by the heat, and several plates were fogged. But I secured good photographs of the male and female Chats at the nest. The male was much the bolder of the pair, and my long vigil was due chiefly to the timidity of the female. In bright sunlight, the scarlet cap and breast of the male, as it sat in the nest, shone like flakes of fire. Many nests of the Tricoloured Bush-Chat were found in a bed of star thistles on the outskirts of the town, and others among long, dry grass in the paddocks. Later, when travelling across the plains, specimens of the Orange-fronted species (*E. aurifrons*) were observed, but no nest discovered.

With Mr. Egger I made two trips to Yanko Creek, about 16 miles from Jerilderie. On the first occasion we visited, *en route*, a great rookery of the Straw-necked Ibis (*Carphibis spinicollis*) in a

shallow lignum swamp on Yanko Station. The birds are strictly protected. We estimated that between 15,000 and 20,000 were nesting at the time of our visit. Some of the bushes supported a dozen or more nests. There were fresh eggs in nests on the outskirts of the rookery, while many of those nearer the centre contained chicks a few days old ; at the hub of the rookery there were broods nearly ready for flight. The older birds declined to remain in their nests when the camera was erected near them ; many climbed the top of the bush and clustered ; while others scrambled or fell into the muddy water, and splashed into the thickest cover. Alone in a nest was an albino fledgeling ; its plumage was not pure white, but of a creamy colour, and it was conspicuous among scores of dusky chicks in neighbouring nests.

Travelling across the plains, I was impressed by the work of the Ibises. In every paddock there were hundreds of birds warring on young grasshoppers. It was easy to see that the Ibises enjoy protection, for they allowed our vehicle to approach fairly close to them before rising to fly a few yards, and resume their feeding. Without *Carphibis spinicollis* to keep them in check, the grasshoppers would indeed become a terrible burden in Riverina. While we were at the rookery a boundary-rider galloped up, but he was reassured when he recognised Max Egger, who had done much to spread knowledge of the value of the Ibis to pastoralists.

Pink-eared Ducks (*Malacorhynchus membranaceus*) breed in the lignum in this swamp, but we failed to find a nest. It was rather risky work searching the bushes, for they are favourite resorts of black snakes. We did not actually see a reptile, but as I thrust a stick into one bush there was a slithering noise, and I prudently retired.

On the journey to the creek many nests of the Australian Crow (*Corvus coronoides*) were observed in dead trees. Most of them were at no great height, and they were conspicuous objects even at a distance. Though nests were so numerous, few Crows were seen. Signs of their presence were noted in the Ibis rookery, where many eggs and nestlings must be destroyed by the black marauders. As the swamp dries up, Ibises that were late in nesting desert the unhatched eggs, which are eagerly devoured by Crows and rats.

Yanko Creek is a fine stream, whose banks are lined with big eucalypts, while the trunks of dead gum-trees rise like twisted grey columns from the water. We camped in a pleasant spot, where the ashes of old fires told of former camps enjoyed by my friend and others. On the morrow, a voyage among the dead gums in a "flattie" took us to the nests of Ducks, Cockatoos, and Parrots. Thousands of Rose-breasted Cockatoos (*Cacatua roseicapilla*) were breeding in the hollows, and the clamour made by the birds when they returned from the feeding grounds was deafening. But their harsh cries were forgiven, because of the birds' beauty. Wheeling above the trees, the noisy flocks presented a picture that will not soon fade from memory. Rose-pink and silver-grey in the early sunlight glowed and gleamed alternately against a pale blue sky. The nestlings offered a harsh contrast to their parents: they are grotesque and querulous creatures, at the very antipodes of grace and beauty. Taken from a hollow, two infant Galahs protested vigorously, and, when placed on a stump, menaced each other as well as the photographer. Placing my bare hand and arm deep into a Galah's nesting hollow, I wondered how the young birds could stand the high temperature during the blazing November days. One would hardly be surprised to find their flesh baked brown; but the heat really agrees with them. There were hollows in every tree, which in the great majority of cases were occupied by Galahs. In one tree we noted seven nests, and many each had three or four.

Several pairs of Cockatoo-Parrots (*Calopsitta nova-hollandiæ*) were nesting in the hollow limbs of dead trees in the creek. One nest contained young birds, and we watched them at dinner. The parent birds shared the duty of feeding the brood. Flying to the end of the broken branch, the male was greeted with gaping beaks, and into these, in turn, he regurgitated food. Then he flew away, and presently the female appeared, and the process was repeated. Unfortunately, a camera could not be used, as the nursery was in a slender bough, about 30 feet above the water. Later, a more accessible nest was discovered, and photographs of young Cockatoo-Parrots were secured.

Continuing our voyage in the flattie, we next examined the nest of a pair of Yellow Parrots (*Platycercus flaveolus*) in a deep

hollow. The tree trunk was hard and smooth, and to climb to the nest I was compelled to chop steps in the tough wood; even then I had a fall into the boat, and barked my shins severely before the object was attained. The nest contained four fairly fresh eggs. My companion remarked that the Yellow Parrot was becoming rare in the district, but in the course of the day two other nests were found.

In a shallow knot-hole on a huge bent limb a pair of White-rumped Wood-Swallows (*A. leucogaster*) had a nest, which seemed beyond our reach. But my companion, after a stiff climb, and at the risk of a ducking, secured the three nestlings, and we took them ashore. They were just able to fly, and gave much trouble to the photographer. One bird, in fact, flew into a tree, where it was welcomed by the parents. Then the old birds continued their efforts to rescue the other fledgelings. Repeatedly they darted down to the branch on which the young ones were perched, and occasionally made vicious dives at my head. Finally, the whole family was united again, but the parents were not content until we left the vicinity of the tree among whose branches the brood was concealed.

An interesting nest was that of a pair of Black-cheeked Falcons (*Falco melanogenys*), in a big hollow, at the height of about 40 feet. The birds have nested in the same place every season for a number of years, though I believe that the eggs have been taken more than once. Several nests of the Nankeen Kestrel (*Cerchneis cenchroides*) were discovered, some being at a great height in living gum-trees. One nest was in a hollow of a dead tree, on the bank of the creek. The brood consisted of five, and, as the birds were well grown, they were awkward to handle. We got them all out of the hollow eventually, and, ranged on a bough, they made a fine picture. Four were returned to the nest, but the fifth eluded us, and tumbled into the creek. We feared it would drown, but, using its wings as paddles, it managed to reach the other bank, and scrambled ashore, safe, though bedraggled. The Kestrel preys mostly on small lizards, field mice, and insects, but when driving into Jerilderie we saw one swoop at a Wood-Swallow, and bear it aloft in its talons. Such an occurrence, surely, is rare.

On the return journey to Jerilderie we again called at the boundary riders' huts where we had spent the night on the way to the creek. We learned that White Cockatoos (*C. galerita*) were nesting in the vicinity, but could not spare the time for a side excursion to the spot. As we neared the town a dust storm overtook us, and for at least three minutes pony, jinker and ornithologists were enveloped in darkness. The dust was so thick that we could hardly breathe, and when the storm had passed we were coated in grey from head to feet. The dust swooped on us like a moving wall that towered into the sky. On the plains in summer these storms frequently occur.

Max Egger, during portion of the year, followed the occupation of bird-trapping; he sent large numbers of Galahs and Warbling Grass-Parrots (*Melopsittacus undulatus*) to dealers in Sydney, receiving for the former birds about ninepence each, and less for the Budgerigars.. He asked me to accompany him and two assistants on a trapping expedition, and I accepted the invitation. My friend explained that if he did not trap the Galahs the birds would be poisoned or shot in thousands, as they were regarded as pests by men on the land. And I found that the trappers were welcomed wherever land was devoted to wheat-growing. I did not actually see a Galah attacking wheat, but was shown a field where the ears had been stripped and the stalks were mostly broken; this was declared to be the work of Cockatoos. The evil of poisoning is that not only Galahs, but other birds, that are certainly not pests, suffer.

The trapper's outfit consisted of a waggon surmounted by a large cage, divided into compartments, a jinker, nets, stakes, call birds, and so forth. The large vehicle was drawn by two horses. Leaving Jerilderie early one morning, we travelled slowly northward across the plains, and towards sundown entered a farm paddock, where we outspanned for the night. The farmer welcomed us, and said that the "Galahs were eating him out." In the evening, nets and poles, bagging, and other articles were carried to a crop paddock, and the trappers soon had everything ready for operations next day.

We were astir before sunrise, for only in the early morning can trapping be carried on with a good chance of success. Each net is controlled by a long rope, and the trapper, crouched behind a

screen of bagging against the fence, holds the free end, ready to give a sharp pull at the right moment. Soon after the eastern sky became flushed with rose-pink, the colour of the Galah's breast, small flocks of the birds came flying toward the paddock from the trees along Yanko Creek. Gradually the size of the flocks increased, till there were thousands of the birds in sight. The call birds, tethered to the nets, "spoke" to those in the air, and presently a flock of about 30 Galahs circled over the net I was watching, and then alighted. The trapper pulled the rope, the poles leaped together, and a babel of harsh cries arose. Eleven birds had been caught, and they were quickly transferred to a box. In the course of an hour the nets were sprung three times, and the tally of captives was 87: this was not considered a particularly good result. The Cockatoos were transferred to the big cage on the waggon, where they huddled on the long bamboo perches. Sulky at first, they soon became resigned to their lot, and ate and drank. In addition to netting the adult birds, the trappers gather nestlings and rear them.

We moved toward fresh fields before noon, and spent the night at a farmhouse. One of the two ladies at the homestead was a lover of wild birds, and had tamed several Galahs without caging them. All day, she said, these birds were away with the flocks, but toward sunset they returned to the homestead, where they remained during the night. I was lucky enough to see three of these tame wild birds early in the morning, and secured photographs of them on their favourite perch. The trappers, who had been at work before I awoke, reported an albino Galah, which they failed to capture. Max Egger, from a nest in the Jerilderie district, each season for three years in succession, took two albino fledgelings, and reared them all. He had one in his aviary, which I photographed.

Several nests of the "Blue-bonnet" (*Psephotus xanthorrhous*) were found in hollows of gum-trees in a paddock near the farmhouse. One nest was right on the ground, within a hollow trunk, the entrance hole being some 12 feet above. On another farm we were introduced to a young Australian Crane or Native Companion (*Antigone australasiana*), which the children had captured and reared as a pet. The bird, which had the freedom of a small paddock, was friendly, though it showed some fear of the camera. Its plumage

was similar to that of the adult Crane, but there was still a mass of beautiful silvery-grey down on the rump and flanks. The legs were sufficiently developed to enable the young bird to run briskly. and dodge its pursuers very cleverly when it tired of posing for a portrait. We heard that, in another locality, no fewer than 400 of these noble birds had been destroyed by poison.*

Yanko Creek was reached at noon on the third day out from Jerilderie, and the shade of the gums was very welcome after the sun-glare and dust of the plains. Max Egger and I had come here together in the jinker, leaving his two assistants to continue trapping on the wheat lands. We camped in the old spot. While the billy boiled we sat in the shade and watched the bird-life of the creek. A flock of Maned Geese (*Chlamydochen jubata*) paddled down stream, within a stone's throw of our camp. (We had also seen Wood-Duck earlier in the day, resting under a gum tree near the Ibis Swamp). Galahs, Yellow Parrots, and many other birds were noted. After the meal we made a voyage in the flattie, and my harvest of photographs was increased. On the following day we struck camp and drove along the creek for several miles, to a beautiful spot, the haunt of a pair of Delicate Owls (*Strix delicatula*). The nest, which had been found by my companion some weeks previously, was in a deep hollow of a dead gum-tree standing in the creek. A natural causeway of logs and *débris* enabled us to reach the tree dryshod, but it was not so easy to climb the hard, polished trunk. But Max Egger, who was a skilled and fearless climber, won to the nest, and descended carrying a young owl. The queer little bird was almost enveloped in creamy white down, softer than teased silk, but its tail and wing feathers were well developed. Perched on a bough, it blinked sleepily, and made scarce an effort to escape.

When the owls' nest was discovered, more than a month previously, it contained eggs. On a second visit, Mr. Egger found two nestlings, one of which was evidently several days older than the other, in the hollow. Now there was only one owlet, the first-born, no doubt, being somewhere among the trees with its parents. The beak and legs of the owlet we photogtaphed were

* A most calamitous destruction! Will more species of Cranes go the way of the beautiful Whooping Crane of N. America?—ED.

well developed, but the latter were not strong enough to keep the bird securely on its perch.

This quiet reach of the creek was also the haunt of a pair of Boobook Owls (*Ninox boobook*), whose nest was in a hollow of a dead tree a few feet from the bank. It would have been pleasant to camp there for the night, and watch the owls flitting on noiseless wings through the shadows and moonbeams among the ancient trees. But our plans would not permit of this. (The owlet was taken to Jerilderie, and would have been reared as a gift to the Zoological Gardens, but it escaped from its box one evening. While in captivity it ate sparingly of raw meat.)

Leaving the owls' haunt we walked to a billabong where hundreds of budgerigars were nesting in the dead eucalypts. Many birds were seen entering and quitting hollows, but our boat was miles away, and all the nest-trees were in deep water. So we had to be content with watching the Warbling Grass-Parrots. Crossing the plains, vast flocks of these lovely birds were observed. In a big hollow, near a wheat field, we noticed at least a thousand budgerigars feeding on dry grass. They were so absorbed that they were unaware of our presence till we stood on the edge of the depression, only a few feet from the nearest birds. Then some of the little parrots raised their heads, the alarm fled like flame in stubble, and the whole flock rose simultaneously and flew swiftly to a dead tree a hundred yards away. When the birds settled, every branch of the tree seemed suddenly to be clothed in green and yellow leaves, which stood erect instead of being pendent. On the wing, budgerigars resemble large butterflies, and a flock in flight is one of the most charming sights I have seen in all my wanderings through Australian wilds. Many of these birds are killed in flight by striking against telegraph wires. On the road near Jerilderie I counted over a score of bodies, and my companion said that this was not unusual.

In very dry seasons Warbling Grass-Parrots travel far south, and small flocks were observed in the summer of 1915 amid the tea-tree at Black Rock on Port Phillip Bay. "Old Bushman," in his charming book, "Bush Wanderings of a Naturalist," mentions this species in the chapter on the ornithology of Port Phillip. "Occasionally, but very rarely, he writes, "a flock of the budgerigar, or

shell-paroquet, would pay us a visit; and I recollect, in the middle of the summer, 1854, our gum-trees swarmed with them. They stayed about a month, when they suddenly disappeared, and only an odd straggler or so has been seen in our district." On the Riverina plains, in a good season, thousands of budgerigars are captured by the trappers, and the market is glutted, with the result that the birds realize only a few pence apiece. I am a staunch advocate of bird protection, but I cannot truthfully say that trapping has any appreciable effects on either Galahs or Warbling Grass-Parrots. With regard to the former species, my friend declared that they were even more numerous in 1913 than they were several years before. But we should be watchful, for some birds that are now extinct—the Great Auk and the Passenger Pigeon, for instance—formerly existed in great numbers.

After returning to Jerilderie, I spent a day with Mr. Egger, hunting for a nest of the Australian Dotterel (*Eudromis australis*). The place where we searched is not far from the town—a desolate area, with scanty vegetation. There are large barren patches of greyish-white soil, surrounded by beds of star thistle and other lowly plants. Signs of the birds were seen, and more than once we felt sure that a nest would soon reward our patient patrolling; but always came disappointment. My friend had secured two clutches of eggs from this locality. One was discovered by a boundary rider who saw the Dotterell go to her nest. The birds are extremely wary, and nests are most difficult to find.

Before bidding my friend farewell, I asked him to write a paper for *The Emu*, and he promised to do so when he had leisure. But death intervened, and we have lost a very valuable contributor to the knowledge of Riverina bird-life. Mr. Eggar was a true naturalist, and no man has had a more genial and kindly companion than I had in my Riverina rambles.

WAGTAILS IN HEREFORDSHIRE.

One day towards the end of August, on a narrow lawn between the house and the moat, and within eight yards of the windows, I saw three species of wagtails running about. Pied; White (*M. alba*); and Grey. Furthermore, although I was unable to verify it, I feel almost certain that a pair of white wagtails nested here, for they were about the place in close proximity to the house all the spring time, and I saw the male bird on several occasions with his beak full of insects. Between the two ponds, one of which is within a few yards of the front door, there is a paved path, at the entrance to which is a high square archway of old and massive oak beams, in the cross-beam of which there are one or two crevices in a position eminently suitable for a pied wagtail's nest at any rate, and on this archway the white wagtails used often to sit. Somehow or other, as they usually do, the days and weeks fled by, and I never investigated as I had intended to. In any case the white wagtails are still here, and I have only missed them for about six weeks, in July and part of August.

There were a great many young birds of the year; more than two or three pairs of pied wagtails could have produced, seeing that two pairs had to rear cuckoos! During the last fortnight of September there was a notable gathering of wagtails; juvenile pied as far as I could see. They flocked of an evening, arriving all together, and settled in rows on the ridges of the old barns. I counted sixty in this way on the evening of the 21st of September, and at *least* twenty more had flown to the willows on the two small islands in the two ponds, where the whole company gathered for the night. When they arrived they looked like a large flock of swallows, and performed various evolutions in the air before they finally went to roost. A very pretty sight. They were perfectly easy to count, for they sat on the ridges of the roofs silhouetted against the sky line, and were for the most part about six inches apart from each other. A large number would suddenly take wing and fly away over the meadows as if they intended to roost elsewhere, and then in a minute or two they returned to once more perch on the barn tops.

HUBERT D. ASTLEY.

ROBINS.

By Dr. E. HOPKINSON.

The "Robin," "Robin Redbreast," the home-bird of Britain, has lent his name and had it carried everywhere throughout the world, that is to every place where Britons have made their homes, and that one can truly say *is* the wide, wide world.

In North America the "Robin" is the American Thrush (*Turdus migratorius*), which is also popularly known as the "Redbreast," "Robin Redbreast." Here also these names are commonly applied to the Bluebird (*Sialia*). In the West Indies "Redbreast," "Robin Redbreast" indicate the Todies, while in South America the Marsh-Starling (*Leistes*), owes to his red breast the honour of this name among the English speaking dwellers in that half-continent.

In Australia and New Zealand it was some of the Flycatchers, which reminded, more by their habits than their colours, the early settlers of the "Robin" they had left behind, and these (*Petroeca*, *Miro*, etc.) to this day bear the familiar name.

Everywhere we may expect to find some "Robin," although in many cases the bearer of this love-name, as one may call it, is a bird which differs widely from its original. As an instance one may take the Knot, which in a certain stage of plumage is popularly known to gunners both at home and in North America under the name, "Robin," "Robin Redbreast," or simply "Redbreast." The Red-breasted Merganser, too, is another water-bird, with nothing robin-like about it but the colour of its breast, which is also locally known under the name of "Robin."

It is however when the name is used with qualifying epithets, that its very wide distribution is brought most strikingly to one's attention, for thus used, it not only supplies popular or vernacular names, but provides or has provided both old and modern writers with suitable book-names for all sorts and conditions of birds, as the following alphabetical list, in which vernaculars are distinguished by their inclusion in inverted commas, attempts to show.

"AMERICAN ROBIN," *Turdus migratorius*.

"BEACH ROBIN," a local British and American popular name for the KNOT (*Tringa canutus*).

"BLACK ROBIN" in Australia is the Flycatcher, *Petroeca bicolor*. BLACK

ROBIN as a book name indicates one of the Bush-Chats, *Thamnolaea nigra*.

INDIAN BLACK ROBIN, a name used by Jerdon for one of "INDIAN ROBINS" (*Thamnobia fulicata*).

WHITE-WINGED BLACK ROBIN, also Jerdon's, was his name for the PIED STONECHAT, *Pratincola caprata*.

"BLUE ROBIN," American popular and English dealer's name for the BLUEBIRD, *Sialia*.

BLUE-HEADED ROBIN, one of the Asiatic Robins, *Adelura caeruleocephala*.

BLUE-THROATED ROBIN, the BLUETHROAT, *Cyanecula suecica*.

"BOB ROBIN," an occasional local variant of "ROBIN."

BUFF-SIDED ROBIN, a book name, originally given by Gould, of the Australian Flycatcher, *Poecilodryas cerviniventris*.

BUSH-ROBINS, a book name which is applied to several of the true Robins and their allies, as the

BLACK BUSH-ROBIN, *Cercotrichas podobe*, of Africa.

RED-FLANKED BUSH-ROBIN, *Ianthia rufilata*.

RUFIOUS-BELLIED BUSH-ROBIN, *I. hyperythra*.

WHITE-BROWED BUSH-ROBIN, *I. indica*, all three Asiatic species.

and also to a few Flycatchers, for example, the

GOLDEN BUSH-ROBIN is *Tarsiger chrysaeus*, of the Himalayas.

SILENT BUSH-ROBIN is the name used in Stark and Sclater's Birds of South Africa for *Bradyornis silens*.

WHITE-STARRED BUSH-ROBIN, the same author's name for another African species, *Pogonocichla stellata*.

"CANADA ROBIN" is a local American vernacular of the "CEDAR-BIRD" (*Ampelis cedrorum*).

"CAPE ROBIN" (South African vernac.), the CAPE ROBIN-CHAT (*Cossypha caffra*).

CHAT-ROBINS, a modern book-name for Chats of the genus *Cercomela* and its allies.

ANT-EATING CHAT-ROBIN, *Myrmecocichla formicivora*.

BLACK-THROATED CHAT-ROBIN, *M. bifasciata*.

BLANFORD'S CHAT-ROBIN, *Cercomela fuscicaudata*.

INDIAN CHAT-ROBIN, *C. fusca*.

SICKLE-WINGED CHAT-ROBINS, the South African Chats of the genus *Poliocichla*, specifically *P. sinuata*.

TEMMINCK'S CHAT-ROBIN, *Cercomela melanura*.

CHATHAM ISLAND ROBIN, *Miro traversi*.

COREAN ROBIN, the name incorrectly used by Seebohm for the LOOCHOO ROBIN.

DUSKY ROBIN (Gould), *Petroeca vittata*.

FLAME-BREASTED ROBIN, also a name of Gould's, *P. phoenicea*.

FLY-ROBIN, a name applied by Australian writers to the Flycatchers of the genus *Heteromyias*.

ASHY-FRONTED FLY-ROBIN, *H. cinereifrons*.

"GOLDEN ROBIN," local American popular name for the "BALTIMORE ORIOLE" (*Icterus baltimore*).

GREY-BREASTED ROBIN, Gould's name for one of the SHRIKE-ROBINS, *Eopsaltria georgiana*.

GROUND-ROBINS, a modern book-name for the ROBIN-CHATS of the genus *Erythropygia*, of Africa. It is also sometimes applied to the allied *Cossypha*.

ABYSSINIAN GROUND-ROBIN, *Erythropygia leucoptera*.

CAPE GROUND-ROBIN, *E. coryphaeus*.

RUFous-BREASTED GROUND-ROBIN, *Cossypha quad-rivirgata*.

SMITH'S GROUND-ROBIN, *Erythropygia poena*.

HOODED ROBIN, the Australian Flycatcher, *Petroeca bicolor*.

"INDIAN ROBIN," a popular name for certain Indian CHATS. As a book-name particularly indicates *Thamnobia*.

BLACK-BACKED INDIAN ROBIN, *T. fulicata*.

BROWN-BACKED INDIAN ROBIN, *T. cambaiensis*.

JAPANESE ROBIN. (1) The JAPANESE REDBREAST, *Erithacus akahige*. (2) A dealer's variant of "PEKIN ROBIN."

LITTLE ROBIN, an Australian name of *Poecilodryas nana*, a Flycatcher.

LOOCHOO ROBIN, *Icoturus komadori*.

"MAGPIE ROBIN," Indian popular name for the "DYAL-BIRD," *Copsychus saularis*. (2) As a book-name is applied to birds of the allied Madagascar genus *Gervaisia*.

"MARSH ROBIN," local North American vernacular name for the TOWHEE BUNTING, *Pipilo erythrophthalmus*.

"NEW ZEALAND ROBINS," the Flycatchers of the genus *Miro*. The NORTH ISLAND ROBIN is *M. australis*; the SOUTH ISLAND ROBIN, *M. albifrons*.

OREGON ROBIN, American author's alternative name for the VARIED THRUSH (*Hesperocichla naevia*).

"PEKIN ROBIN," the usual dealer's and popular name for the *Liothrix*.

PIED ROBIN. The name applied by Australian and New Zealand writers to two Flycatchers of their respective countries, *Petroeca picata* and *toitoti*.

PINK-BREASTED ROBIN (Australian authors), *P. rhodinogastra*.

'RED ROBIN," American popular name for both the "RED" and "SUMMER TANAGERS."

RUBY-THROATED ROBINS, the RUBYTHROATS, *Calliope*.

SHRIKE-ROBINS, the Thickheads of the genus *Eopsaltria*.

"SWAMP-ROBIN," local American popular name (1) for the TOWHEE BUNTING; (2) for the OLIVE-BACKED and HERMIT-THRUSHES

"Ground Swamp-Robin," local United States vernacular=the HERMIT THRUSH.

THRUSH-ROBINS, a modern book-name for the Thrushes of the American genus *Catharus*, which are also known as Nightingale Thrushes.

"WATER-ROBIN," Anglo-Indian name for the PLUMBEOUS REDSTART (*Rhyacornis fuliginosa*).

WESTERN ROBIN (American authors) = *Turdus propinquus*.

"WHITE-BELLIED ROBIN," Australian vernacular, teste Gould, for the WHITE-BREASTED SHRIKE-ROBIN, *Eopsaltria gularis*.

"WOOD-ROBIN" (1) Local U.S.A. vernacular = the WOOD THRUSH.
(2) In New Zealand, the popular name of the NORTH and SOUTH ISLAND ROBINS, *Miro*.

PINK-BREASTED WOOD-ROBIN (Gould and later writers),
Petroeca rhodinogastra.

RED-FLANKED WOOD-ROBIN, *Ianthia rufilata*.

ROSE-BREASTED WOOD-ROBIN (Gould), *Petroeca rosea*.

"YELLOW ROBIN," an Australian popular name (teste Gould), for the YELLOW-BREASTED SHRIKE-ROBIN, *Eopsaltria Australis*.

YELLOW-BREASTED ROBIN (1) the above. (2) *Petroeca macrocephala*, a Flycatcher.

Another combination of names in which the word ROBIN appears as the prefix, gives us a further list of species and larger groups of birds.

"ROBIN-BREAST" is a common local name, both in Great Britain and America for the KNOT.

ROBIN-CHATS is a book-name for the Chats of the genus *Cossypha* and its allies, of which *C. caffra*, the CAPE ROBIN-CHAT, known in South Africa as the "CAPE ROBIN," and (from its note), the "JAN FREDRIC," is the typical example.

"ROBIN DIPPER," local American popular name for the BUFFLE-HEADED DUCK.

"COCK ROBIN DUCK," a local name in New Jersey for the HOODED MERGANSER.

"ROBIN HAWK," local British name for the "CROSSBILL."

"ROBIN SANDPIPER," occasional gunner's name for the KNOT.

"ROBIN SNIPE," local American popular name (1) for the KNOT, and (2) for the RED-BREASTED SNIPE-TATLER (*Macrorhamphus griseus*).

"WHITE ROBIN-SNIPE" = No. 1 above.

ROBIN THRUSH, a book-name which is applied to various THRUSHES, as the SPOTTED ROBIN-THRUSH, *Cichladusa guttata*, of South Africa; and (2) by American authors to some of the true Thrushes, as *Turdus confinis*, the CAPE ST. LUCAS ROBIN-THRUSH.

Both these lists could no doubt be swelled, but enough is as good as a feast, and probably many who may have got as far as this will be thinking, that there has been a good deal more than enough on this purely nominal subject.

E. HOPKINSON.

To the EDITOR, *The Avicultural Magazine*.

SIR,—Can any reader give the name of a poem and its author, which I remember to have read, in which quite a number of African birds are mentioned? I have only a very hazy recollection of what it was about, but believe Egypt, and think it must have been a prize poem, as the only two lines which have stuck in my memory, are

"Where mid the (something) palms flash the Blue Roller-birds,"
and

"Polychromatic as erst was the gift-coat of Jacob to Joseph,"
seem to fit that form of poesy.

Secondly, will some literary reader compile for us an Anthology of modern Bird Verse, as a supplement to the Birds volume of Phil Robinson's, "Poet's Beasts and Birds," which is long out of date? * E. HOPKINSON.

*[We cannot on the spur of the moment produce the asked for Anthology, but we hope to be able to print portions of an interesting article on Tennyson's Birds from *The British Review*. Of course, we must not permit Anthology (a collection of small poems) to trespass too much on the real scope of the magazine.—ED.].

The EDITOR, *The Avicultural Magazine*.

SIR,—I would suggest, as an amendment to Dr. Hopkinson's proposed Anthology, that it should be limited to Foreign Birds, as a much smaller and more manageable subject, and at the same time one of special interest from an Avicultural standpoint.

X.

CORRESPONDENCE, NOTES, ETC.

SHORT-EARED OWLS IN THE TRENCHES.

FR. P. N. WAGGETT, S.S.J.E. (a Military Chaplain) wrote to the Editor from France—"I forget whether I told you how in the worst of the fading winter—in February—the short-eared owl was in troops by the tail end of front trenches, flying of course in the day time—flapping like butterflies, and so tame, they rested on every post and stump.

That was the *second* sign of the approaching defeat of winter; the first was wild geese flying north on one of the worst days, with storms of snow; and the second, this vast crowd of the diurnal owl; making, in spite of all slush and cold, for his resting places in the North. They stayed many days in a certain ragged copse close to the citadel, feeding no doubt on the rats and innumerable mice drawn there by cast off tins and pots which were being used there to fill up a long ditch."

THE BLACK REDSTART (*Phœnicurus titys*).

MR. TESCHEMAKER wrote in a letter published in "Cage Birds" that the specific name of *titys* "is neither Greek or Latin, and has no meaning whatever," when criticizing my article on the Black Redstart. We would point out that it is a Greek word and means a small chirping bird (TITIS).

It was spelt '*titys*' by Gesner, and '*tithys*' by Linnæus. Moreover it is used by many eminent ornithologists who have benefitted the world by their works on birds, men such as Morris, Yarrell, Gould, Dresser, Lord Lilford, Seebohm, etc.: and we also find it in the "List of British Birds, compiled by a committee of the British Ornithologists' Union, 1915."

HUBERT D. ASTLEY.

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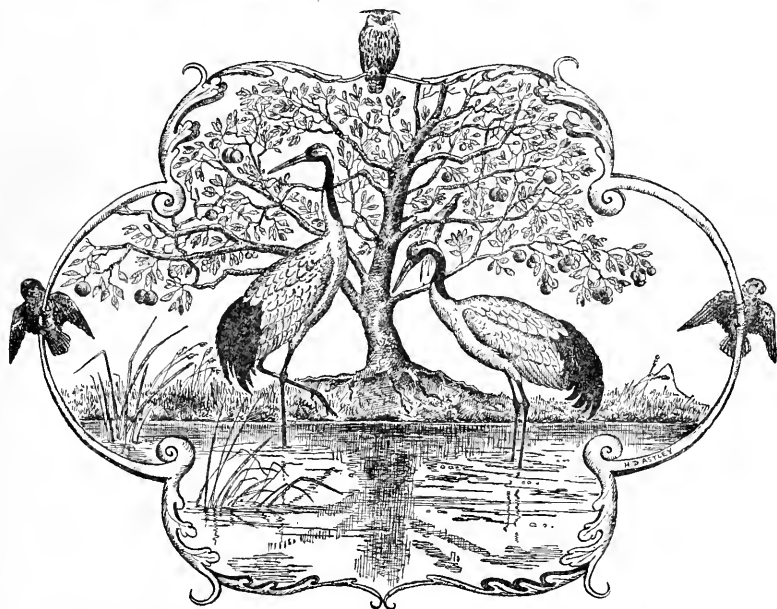
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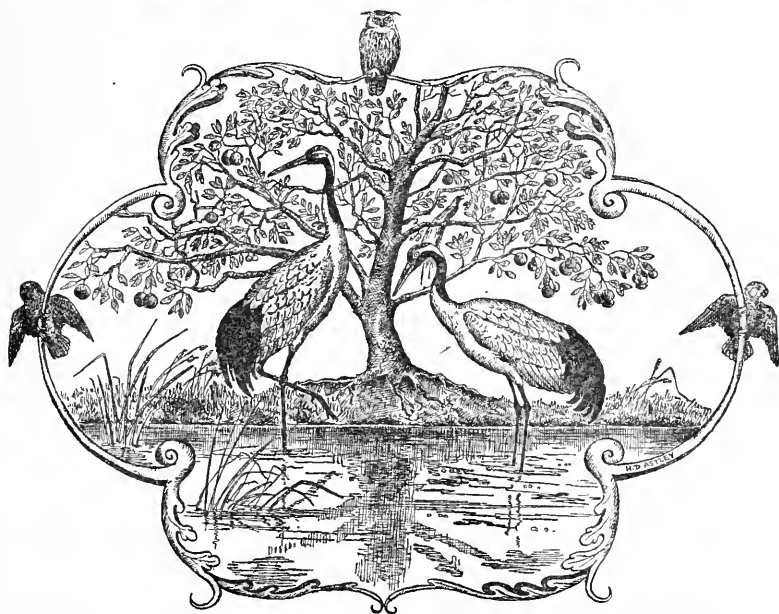
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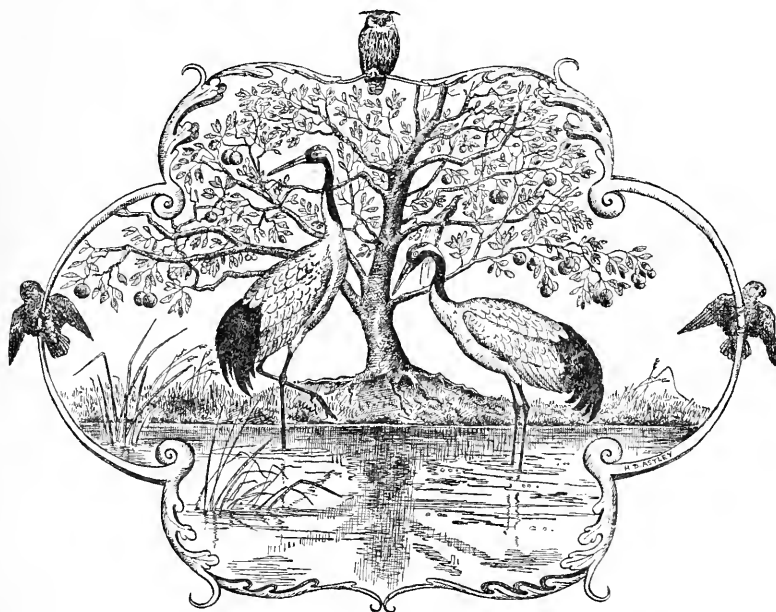
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JANUARY,

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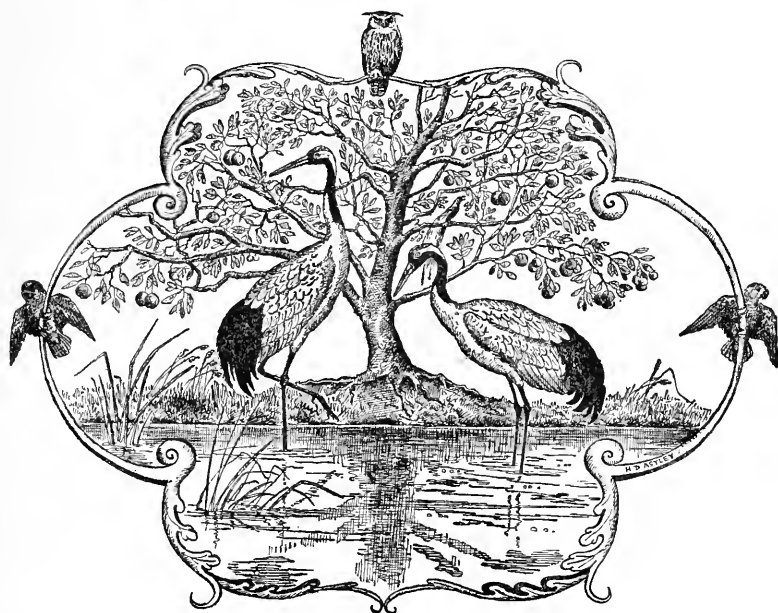
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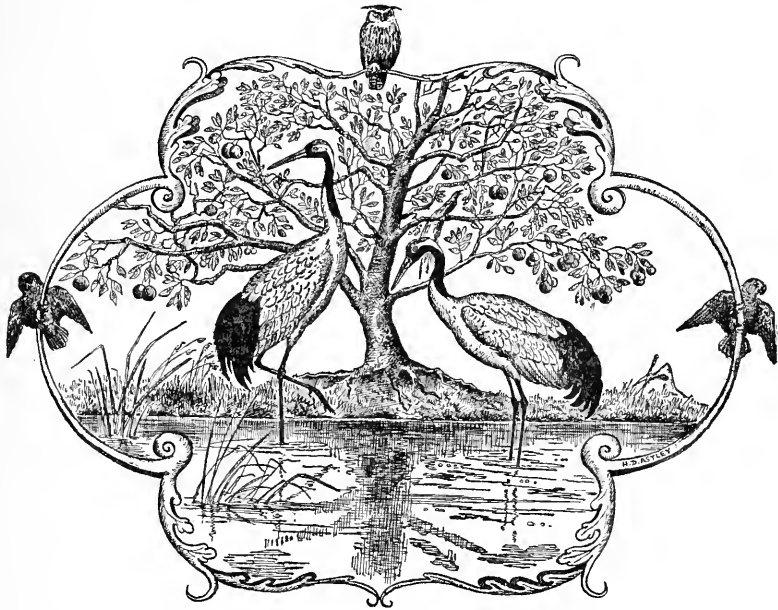
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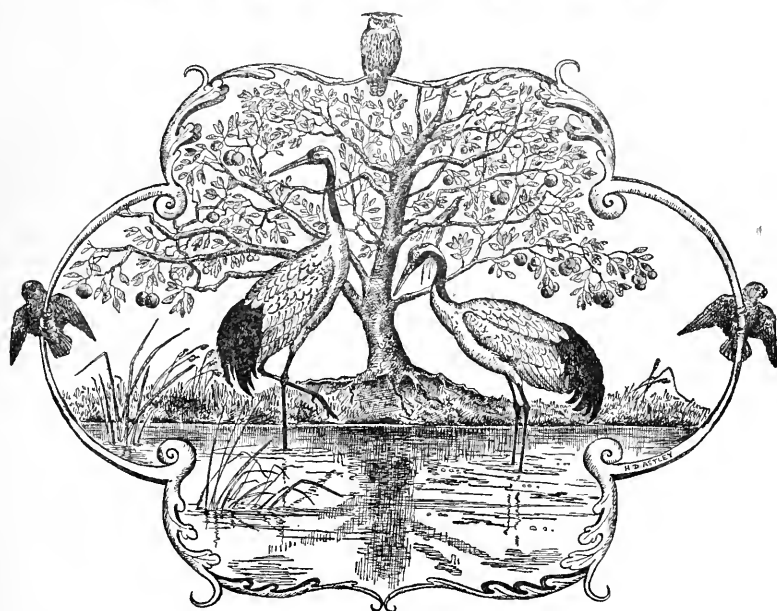
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VOL. VII. No. 6.

The price of this
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APRIL,
—1916.—

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It was also decided that, in future, Members will only be entitled to the Medal providing no account of the event has previously appeared elsewhere."

PLEASE NOTICE.

It will be seen that copy has to be borrowed from other ornithological journals; and the Editor will be very much obliged if Members will do their best to send him original articles and notes.

Also a great portion of this month's magazine is filled up by the Editor himself, and by a *French* member. *Some* copy *must* be kept as a reserve.

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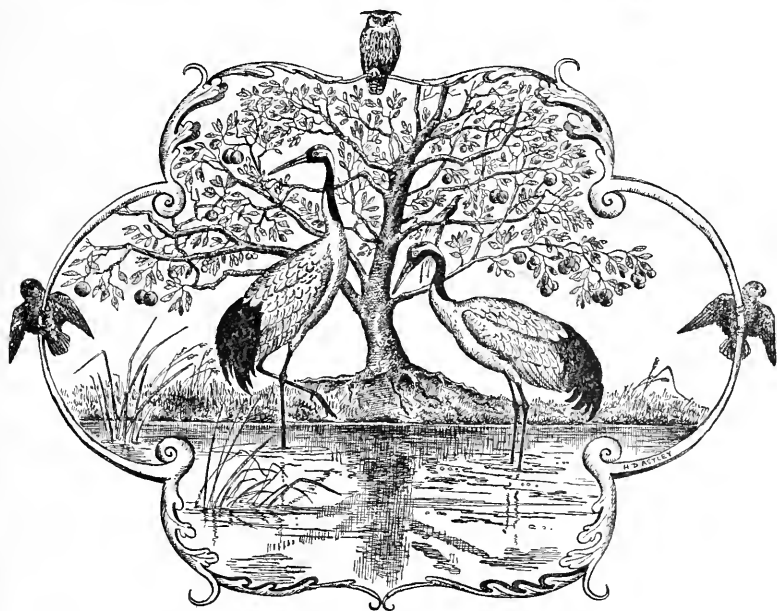
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THE HON. BUSINESS SECRETARY.

Mr. T. H. NEWMAN, to whom the Avicultural Society is greatly indebted for his able and helpful work as Hon. Business Secretary, has felt compelled to resign owing to the necessity of serving his country in the war.

Dr. L. LOVELL-KEAYS has most kindly undertaken to fill the post.  
[See "Notices to Members."]

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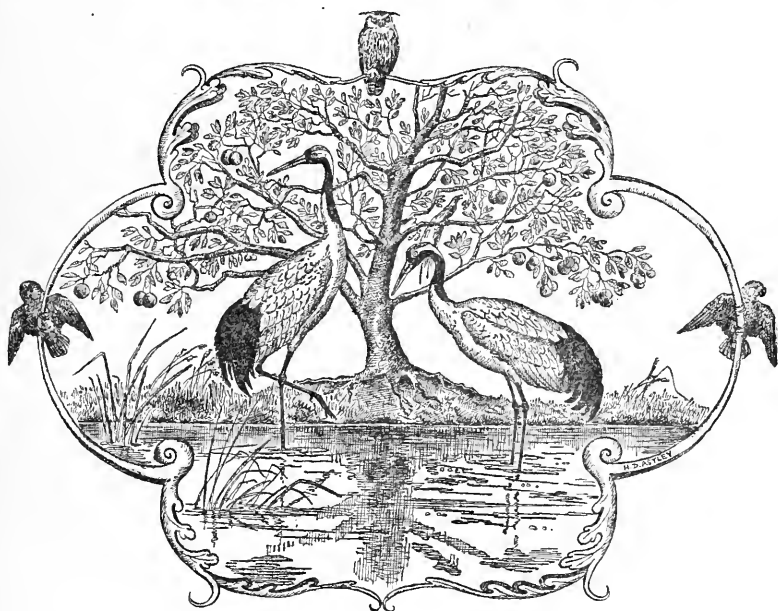
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## IMPORTANT NOTICE.

The summer meeting of the Council will take place, by kind permission of the Zoological Society, in the Council Room, at 3 p.m. on the fourth Thursday in June (*i.e.* the 22nd). After which there will be a meeting of the Members in the Gardens, when the Council hope that as many as can possibly spare the time will come. It affords an excellent opportunity of getting to know other bird-lovers; and the exchange of ideas is good for us and for the pursuit of bird-keeping. It also shows interest in the Society to which you belong.

The fact that it is war time only makes it the more important that we should all make a special effort to be present. Tea will be provided in the Fellows' enclosure at 4 o'clock, to which all members are heartily invited.

Will any member not personally known to the Editor (or Secretary) very kindly make themselves known to either or both, and will they bear in mind that the Avicultural Society is a Society for the exchange of ideas and the making of friends and not a species of Bird-book club whose sole object is to publish a magazine.

We trust therefore that June 22nd, 1916, will not leave us—the Council—disappointed.

L. LOVELL-KEAYS,

*Hon. Business Secretary.*

N.B.—The Editor and Secretary have a number of spare admission tickets which they would gladly send to any member intending to be present on application being made at Park Lodge, East Hoathly, Sussex.

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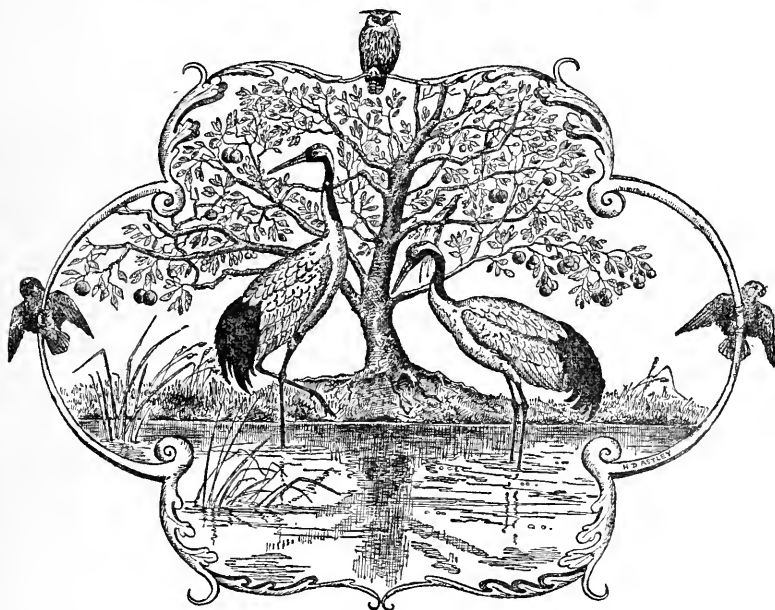
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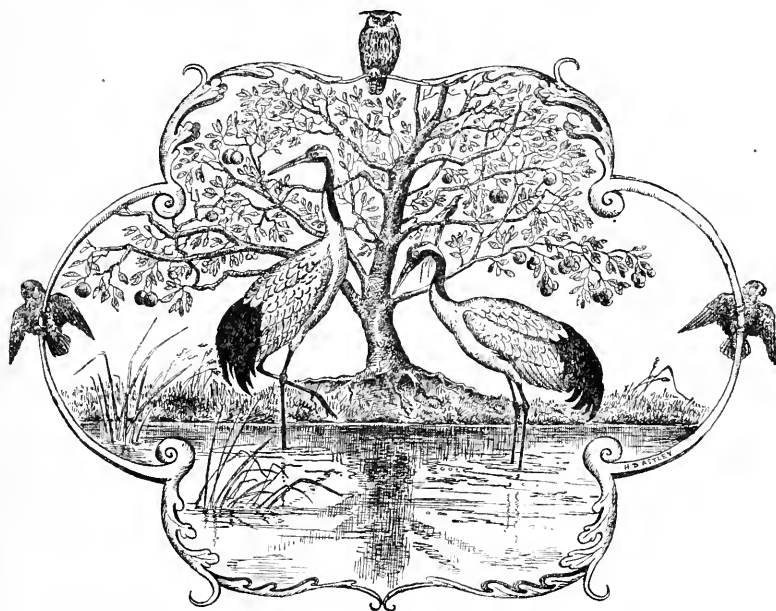
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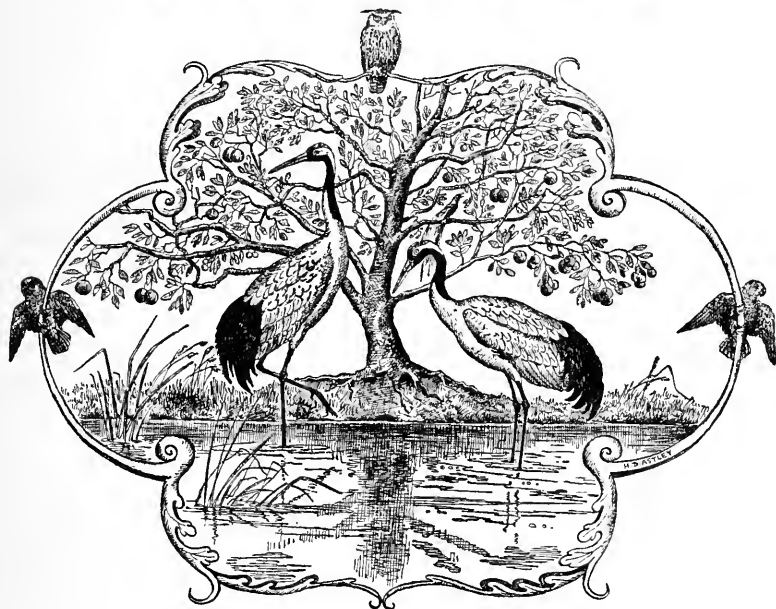
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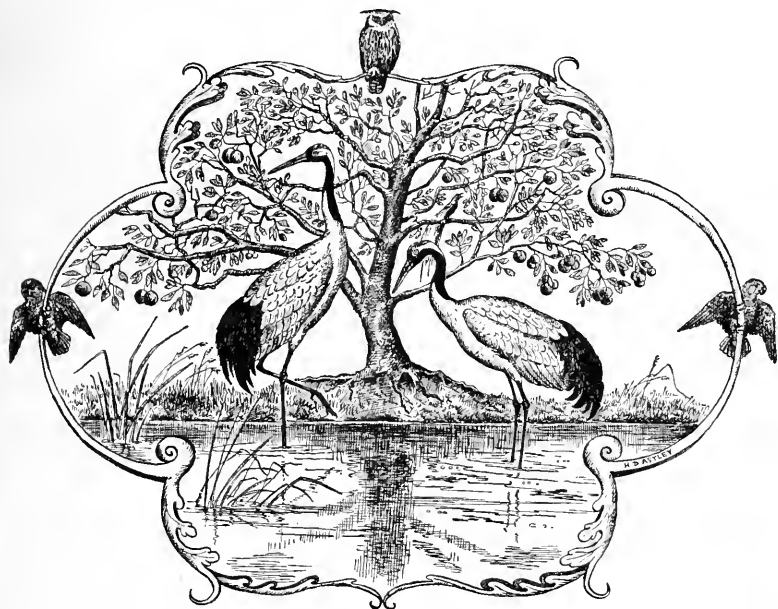
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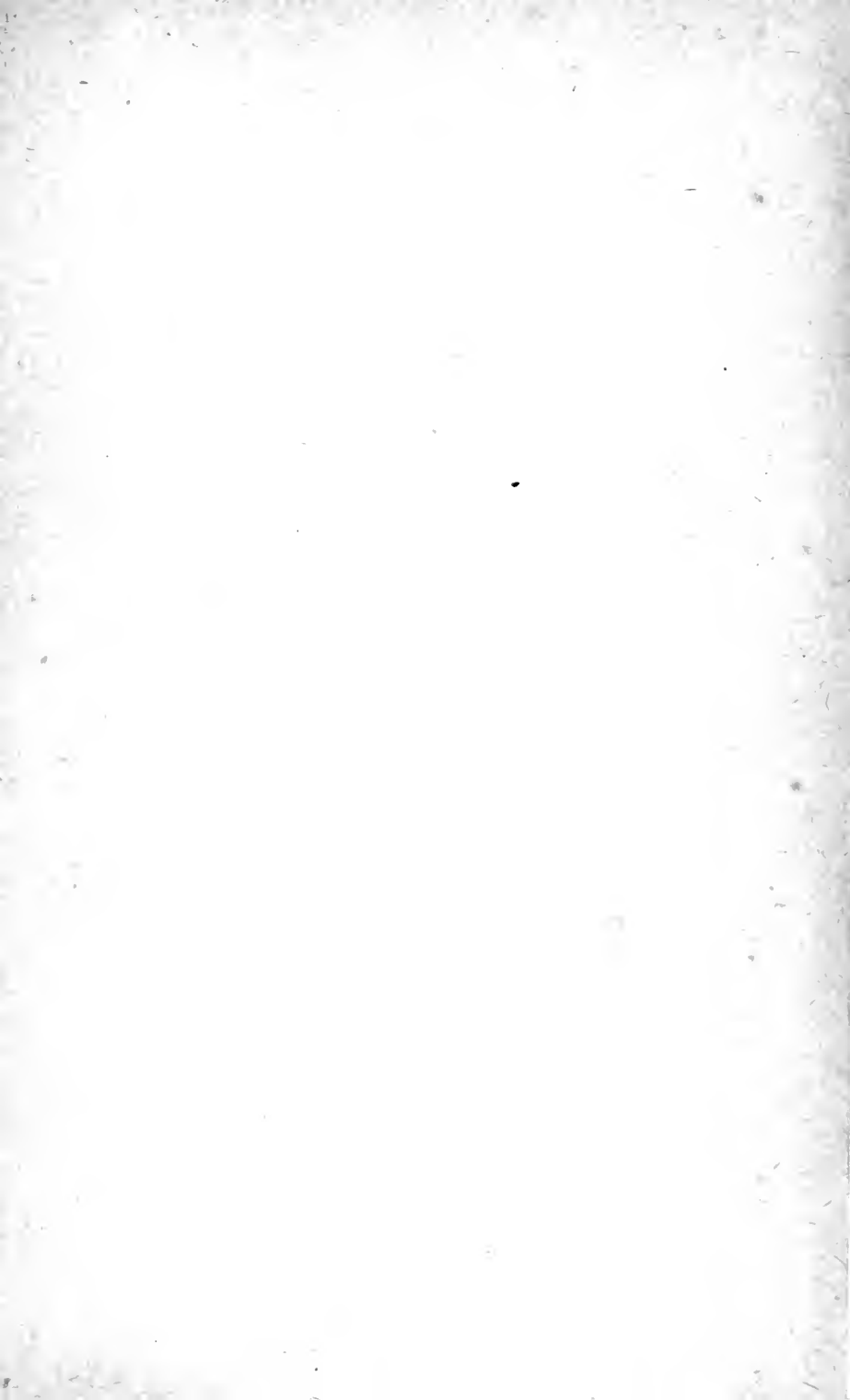
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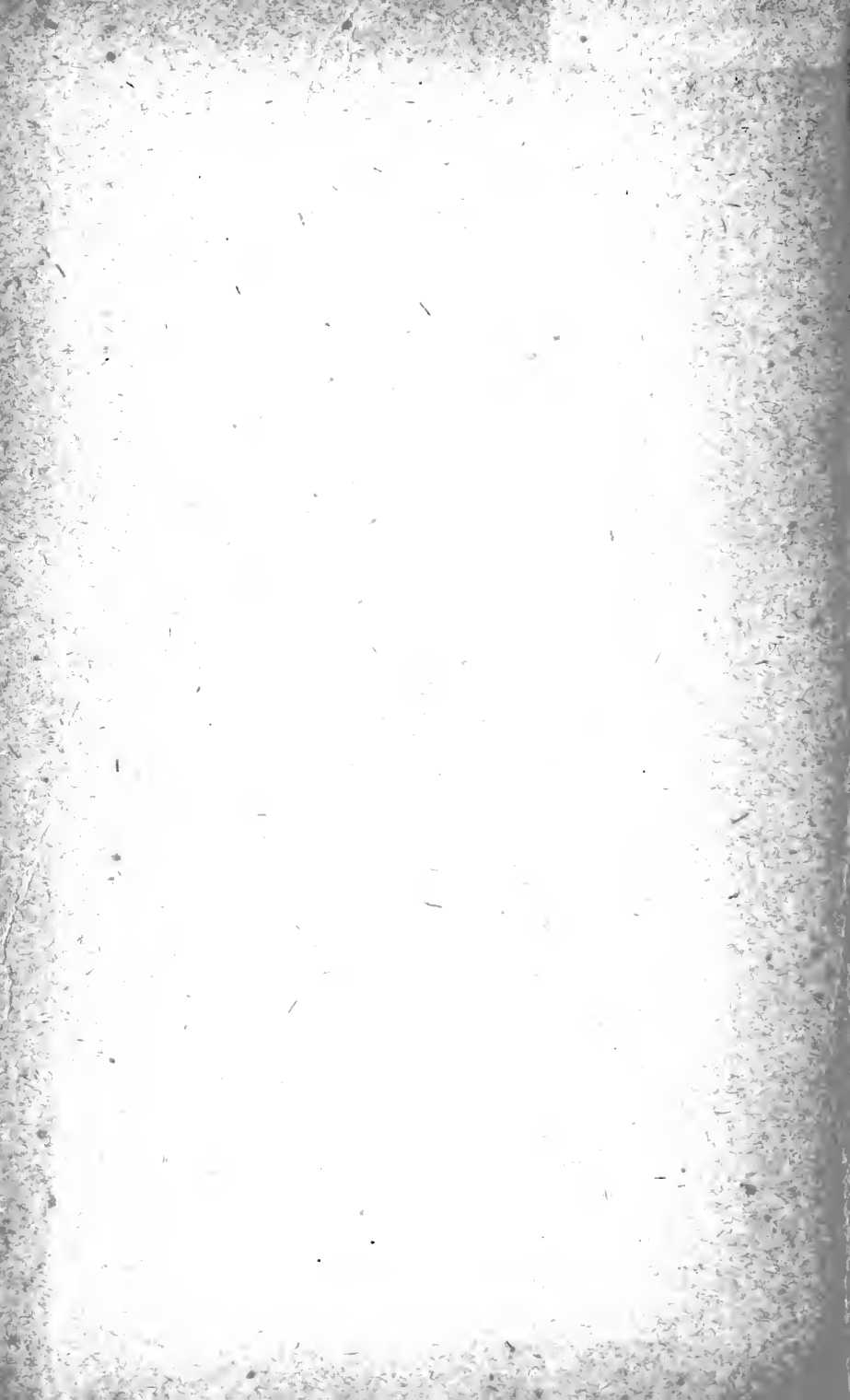
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